## Decode the Future of Innovation.

Beyond Search: Deep Research AI

Where deep research unlocks the blueprint of the future.

IIT AC | Forum | Incubig Al



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COMPILED & EDITED BY Mrinalini Gupta

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PUBLISHED BY Beeja House FORUM RPM is an Al-driven integrated platform designed to help academicians, policymakers, and industry professionals research effectively, refine their ideas, protect their innovations, and monetize their work.



. An IIT Alumni Council initiative .



The quality of life initiative was the brainchild of Ashok Madhukar, a tall leader who played a stellar role in the creation of IIT Alumni Movement.



Late Ashok Madhukar, who passed on in 2021, was a BTech from IIT Kharagpur. He was awarded the Distinguished Alumni by his alma mater. Ashok spent the last three decades of his life in the development sector – first as a part of the Social Fund for Development in Egypt and thereafter as a leading consultant to the government, specialising in the India-Africa corridor and the north east sector.

In 2016, Ashok introduced alumni leaders of the IIT community to the "quality of life" framework. His theory was that if we worked towards deploying technology to address all aspects of quality of life, we could create a blueprint for national progress. It was his strong conviction and passion for creating a nation building organisation that eventually led to the formation of the IIT Alumni Council.

He achieved in his lifetime, what may have otherwise taken decades more - to develop the unique core theme for the IIT Alumni movement. It is thanks to his foresight and guidance that the IIT Alumni Council and related mission organisations shifted focus - inspite of stong opposition from IIT alumni or the IITs, to nation building.



#### About IIT Alumni Council

The IIT Alumni Council is the largest global body representing the alumni of Indian Institutes of Technology (IITs), uniting some of the brightest minds from around the world. Established with the vision to drive innovation and societal impact, the Council fosters collaboration across academia, industry, and public policy.

With a strong focus on research, entrepreneurship, and technology-driven solutions, the IIT Alumni Council is at the forefront of addressing global challenges.

Through initiatives like Forum RPM and consortiums that connect innovators, the Council empowers individuals and organizations to create meaningful, scalable impact.

The Council's initiatives are a testament to the unparalleled legacy of IITs in nurturing leaders, shaping industries, and transforming societies.





### Bridging Innovation: IIT Alumni Council, Forum RPM, and Incubig Al



## The Collaboration of IIT Alumni Council, Forum RPM, and Incubig Al

At the intersection of innovation, technology, and impact lies a powerful collaboration between the IIT Alumni Council, Forum RPM, and Incubig AI. Together, these entities form a robust ecosystem designed to revolutionize the way ideas are researched, protected, and monetized, driving innovation at a global scale.

#### IIT Alumni Council, Forum RPM, and Incubig Al

#### IIT Alumni Council: The Visionary Backbone

As the largest global body of IIT alumni, the IIT Alumni Council brings together the brightest minds from diverse fields. Its mission to foster innovation, entrepreneurship, and societal impact provides the foundation for transformative initiatives like Forum RPM.

#### Forum RPM: The Integrated Innovation Platform

Forum RPM is the embodiment of the Council's vision—an AI-driven platform designed to empower academicians, policymakers, startups, and industry professionals to transform ideas into impactful solutions. It streamlines the journey from research and refinement to protection and monetization, making it a one-stop solution for global innovators.

#### Incubig AI: The Technology Powerhouse

Incubig AI is the deep-tech engine that powers Forum RPM, enabling users to leverage vast patent and research data with precision. Its advanced AI capabilities ensure actionable insights, robust intellectual protection, and seamless monetization strategies, making it an indispensable tool for innovators worldwide.

#### **A Unified Mission**

This synergy represents more than just a collaboration—it is a unified mission to accelerate global innovation and growth. With the IIT Alumni Council's network and vision, Forum RPM's integrated platform, and Incubig AI's technological prowess, the partnership drives impactful outcomes, connecting ideas to opportunities and innovation to global markets.

TROCAL ACTIVITY research intelligence originality review patent drafting patent defence patent licensing enforcement legal and admin

### Forum RPM

Revolutionizing Research, Innovation & Monetization

### About FORUM RPM Platform

Forum RPM is a groundbreaking AI-driven platform designed to empower academicians, policymakers, industry leaders, and innovators across the globe. Built as a single-window solution, Forum RPM integrates advanced technologies to streamline the process of research, idea refinement, innovation protection, and monetization.

At its core, Forum RPM is dedicated to addressing the challenges faced by modern researchers and innovators. Whether it's identifying white spaces in research, refining concepts for maximum impact, or navigating the complexities of patent protection and commercialization, Forum RPM provides a comprehensive ecosystem to support every stage of the innovation lifecycle.

#### What Sets Forum RPM Apart?

- **Al-Driven Insights:** With cutting-edge Al capabilities, Forum RPM simplifies complex research data, enabling users to make informed, data-backed decisions with ease.
- End-to-End Innovation Support: From idea conception and refinement to securing intellectual rights and monetization, the platform provides seamless support throughout the journey.
- **Global Reach:** Forum RPM connects startups, universities, corporations, and governments, fostering collaboration and enabling access to a global innovation network.

#### FORUM RPM, Mission Mode

Forum RPM - a global platform for creation, protection and monetisation of IPR - will function as a mission. Structured like a movement rather than a business, the boundary between clients and experts will be a fluid and ever-evolving one. As more and more clients engage with the platform, the cumulative expertise of the platform keeps growing exponentially.

Self Learning

Forum RPM collects and collates both foundational data and related software patches like any open-source platform. By optimally utilising technology and human expertise, we are working to create a platform that is both self-programming and self-learning. This eliminates the need for working with pre-formulated hypotheses or judgmental opinions. Data is rarely an opinion and mathematics involves very little judgement.

Self updating

Forum RPM has embedded artificial intelligence systems for data collection. By using contextualised search across a range of paywall protected databases, the platform can aggregate information across parameters, creating a continuously upgraded information base. By fusing data into open source, standard compliant databases - the Forum RPM models create a layered unstructured data set which can be randomly accessed through Al tools to create a wide range of analysis.

As the

#### **Highly Automated**

As the amount of data on the internet explodes, it will be possible to get data on almost a real time basis. This can help to continuously upgrade information with the objective of accelerating the pace of research without compromising on the quality. Continuous fine tuning helps improve eventual monetisability.

4

#### Data is the new oil

The Forum RPM platform being an open platform can connect via Docker with any application developer or data owner willing to contribute their stock to the overall Forum RPM stack. The platform thus manifests a multiplier effort as more and more researchers use the Forum datasets for their own analysis.

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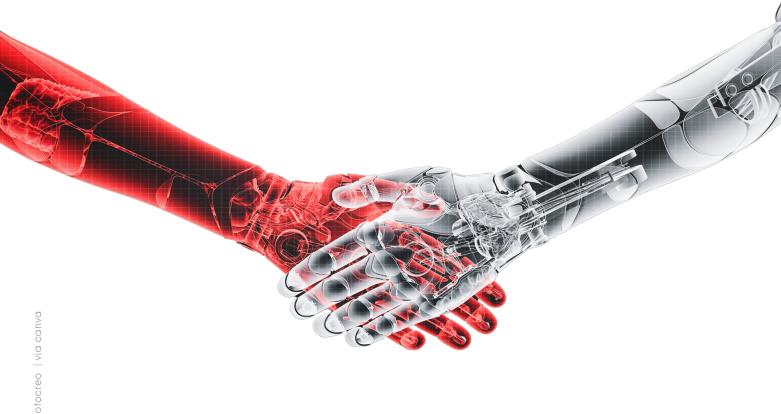
#### Comprehensive

With Forum RPM, you can be assured that you can unfold layers of data akin to peeling an onion. This allows a researcher to move seamlessly from the research data to competitor information to concurrent monitoring of developments elsewhere to pricing information for monetisation. The platform assists in acting as a data aggregator across domains.

image credit. photocreo | via canva

The cost and complexity of bespoke technology services continue to rise, while the supporters and depth of an open-source platform keep growing. This results in exponentially declining costs of data and related services for an open source platform like the Forum RPM.

By developing an ecosystem of credible and wellfunded technology partners, Forum RPM is able to access large infrastructure facilities as well as trained specialist manpower to help in the costeffective and timely development of a massive technology stack which neatly separates the raw data from the applications processing it. Application providers cannot access or download the raw data.





#### THE RPM MODEL

Forum RPM operates on a structured model designed to drive results:

#### Research (R)

Generate actionable intelligence by analyzing competitive landscapes, identifying innovation opportunities, and enhancing research outcomes.

#### Protect (P)

Secure patents and intellectual rights with precision, ensuring ideas are safeguarded against infringement.

#### Monetize (M)

Unlock the value of innovations through effective commercialization strategies, licensing, and client outreach.





#### Strong global Partner Networks

Given the relatively recent emergence of IPR monetisation opportunities and ecosystem players, there are only a limited number of established players and proven technologies for implementation. Most of these service providers are from a pre-AI era and substantial manual work is involved in going from secondary data based research to actual original research in the desired form and format.

Forum RPM data partners carefully diligence both - the data available as well as the data collection and collation agencies.



#### **Startup Ecosystems**

India is home to one of the largest startup ecosystems in the world. This includes startups, their mentors, incubators, venture capitalists, and related service providers such as accountants, lawyers, and IPR specialists. The IIT alumni community constitutes one of the most powerful startup ecosystems in the world. Forum works with hundreds of startups to solve challenging problems that range from automated data collection remotely and non-intrusively to simulation models and advanced sensors. Forum GSP has engaged several startups in the Data part of the consortium.

#### Scientists & Academia

The IIT Alumni Council is home to over forty thousand IIT alumni, of whom more than one thousand have earned a PhD or equivalent doctoral or postdoctoral education. These include leading researchers in space, telecom, data science, remote serving, Al, and tens of other specialisations. The institute mission (www.institute.org.in) has over 100 distinguished fellows with a target of growing this base to 10,000 Fellows over ten years.

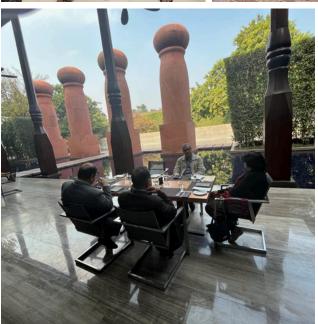
#### **Force Multipliers**

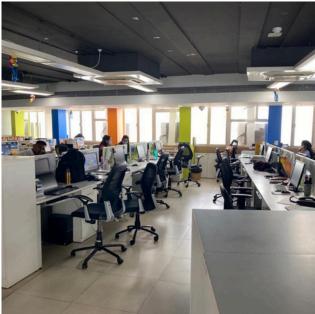
Partner members of Forum RPM now collectively have access to commercial organisations around the world who work in the IPR protection and monetisation domain. Working alongside these global experts on a global basis, facilitates transfer of best practices to and from researchers working with Forum RPM.







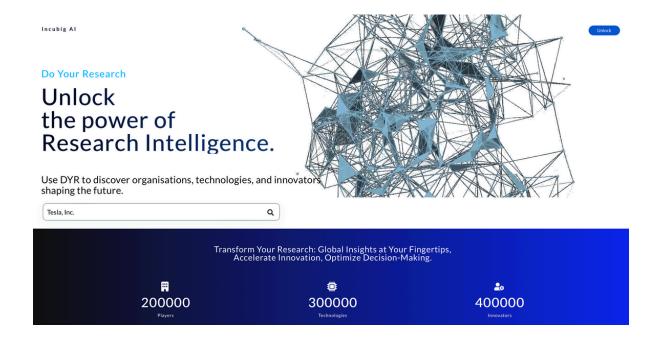












## FORUM RPM Platform Powered by Incubig Al

At the heart of the Forum RPM platform lies Incubig AI, a state-of-the-art deep-tech solution that drives research excellence and innovation. Incubig AI is the backbone of Forum RPM, providing powerful tools for navigating the vast and complex landscape of global patent and research data.

#### The Role of Incubig Al in Driving Forum RPM

Incubig AI serves as the engine behind Forum RPM, enabling it to deliver seamless and intelligent solutions for research, protection, and monetization. By leveraging advanced AI algorithms, Incubig AI transforms complex patent and research data into actionable insights, empowering users to innovate with confidence.

- Actionable Research Insights: Incubig Al processes billions of data points to uncover trends, opportunities, and competitive intelligence, helping users make informed decisions.
- **Precision in Protection:** Its advanced algorithms assist in drafting, filing, and safeguarding patents, ensuring every innovation is well-protected against infringement.
- **Smart Monetization Strategies:** By analyzing market dynamics and identifying potential collaborators or licensees, Incubig Al enables effective commercialization of ideas.



## The Synergy of Forum RPM and Incubig Al

Together, Forum RPM and Incubig AI create a unified ecosystem where research meets innovation. This collaboration transforms how ideas are developed, protected, and monetized, empowering academicians, policymakers, corporations, and governments to accelerate growth and make meaningful contributions to the global innovation landscape.

Forum RPM, powered by Incubig AI, is redefining the future of research and innovation.

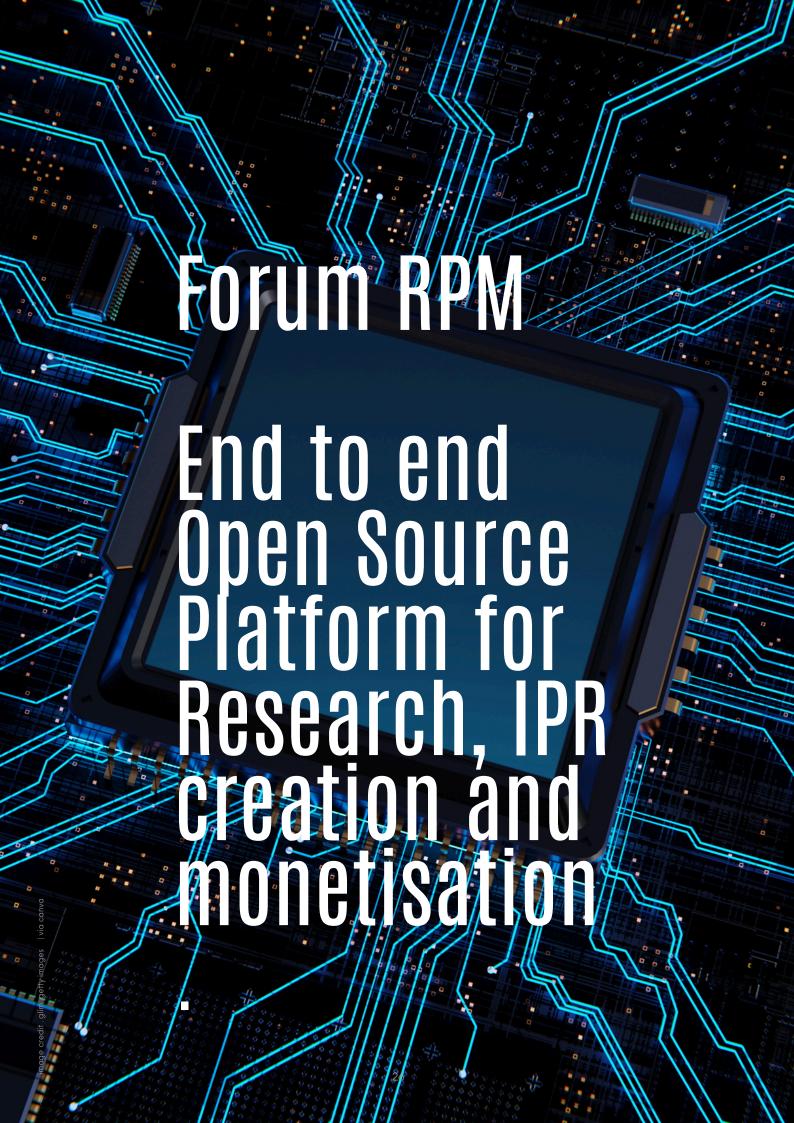


### Leading the Change!!

India is well positioned to lead globally in the area of providing knowledge process outsourcing services for protection and monetisation of intellectual property of various types including technology related IPR.

The Department of Science and Technology (DST), through its various initiatives has been promoting the protection of IPR through patenting and other filings such as copyright and tradenames/ trademarks. India is a signatory to various international protocols and reciprocatory arrangements. As a result, global patents can be filed from India. The government also provides grants and subsidies to both academia and industry to promote filing of patents. Patent filings help businesses to get government contracts and help academia to improve their rankings and ratings.

The Forum RPM aspires to complement the efforts of the government.



### Incubig AI: The Backbone of Forum RPM Platform

Incubig AI is a powerful artificial intelligence platform that forms the backbone of the Forum RPM platform. By utilizing advanced AI and machine learning technologies,

Incubig AI provides in-depth insights into global patent data, research trends, and technological landscapes. Forum RPM leverages these insights to support scientists, startups, universities, corporations, and governments in making informed decisions about the development, protection, and monetization of intellectual property.

With its ability to transform complex patent and research data into actionable intelligence, Incubig AI empowers the Forum RPM platform to drive innovation, accelerate R&D, and optimize patent strategies on a global scale.

Incubig Al

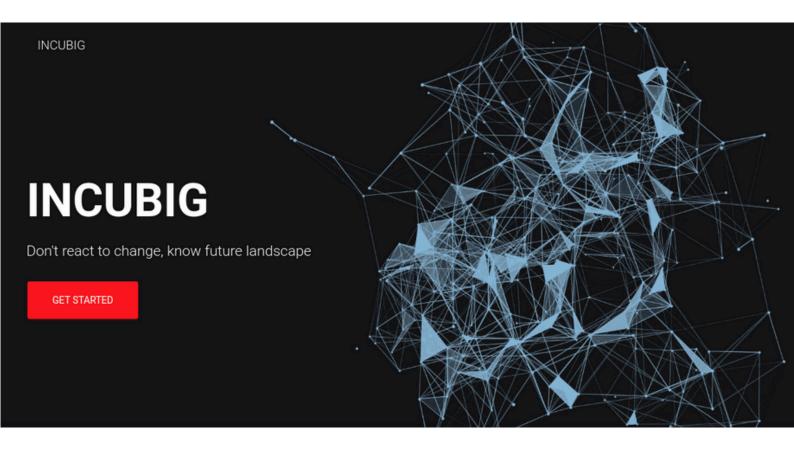
# ACCELERATING RESEARCH, INNOVATION AND GROWTH.

Simple, Unified, Single-Window Platform.



Incubig AI - Research Intelligence

As we look ahead, the convergence of Patent & research data and intelligence on top of it, will drive smarter decisions, accelerating progress across academia, industry, and governance.



#### **About Incubig**

Driving Global Innovation through Research Intelligence.

At Incubig, we're driven by a powerful mission to transform the way businesses, universities, startups & Govts navigate the complex and often opaque world of patents, research, and technological intelligence.

We believe that even within the vast, dynamic landscape of global patent data lies immense untapped potential, and our goal is to unlock this potential for organizations across the world.

With the right tools and insights, innovation becomes not just achievable but sustainable, scalable, and transformative.



In today's rapidly evolving technological landscape, the ability to make informed, research-driven decisions is more important than ever.

Incubig exists to provide organizations with the clarity they need to succeed—whether they are developing breakthrough innovations or seeking to protect & grow their intellectual property in highly competitive Technological markets.

Our approach is grounded in the belief that patent data holds the key to understanding technological trends, emerging market opportunities, and the competitive landscape.

By making this information accessible and actionable, we empower our clients to stay ahead of the curve and to innovate with confidence.



By making research intelligence accessible and actionable, we empower our users & clients to stay ahead of the curve and to innovate with confidence.

#### **Our History**

Founded in 2019 by a visionary team of innovators, Incubig emerged from a shared passion for unlocking the immense potential of patents and research data.

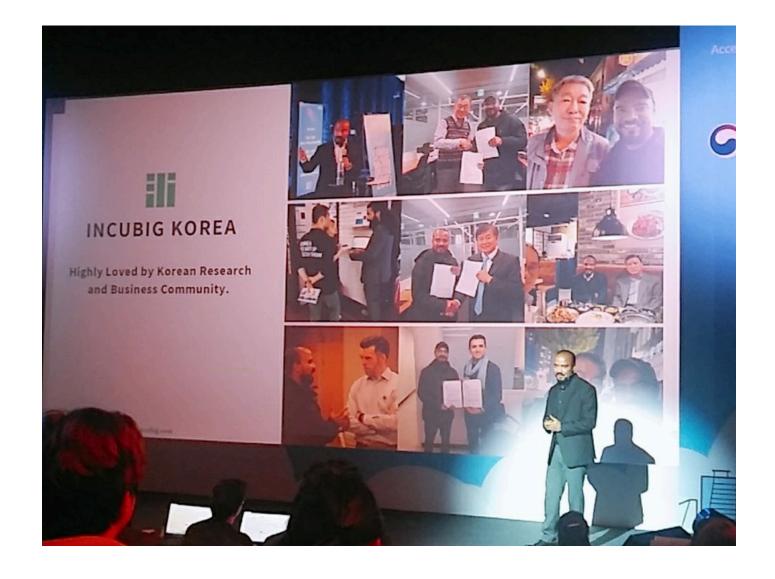
Recognizing the limitations of traditional patent analysis—often slow and cumbersome—the team set out to revolutionize the process by harnessing the power of artificial intelligence (AI) and machine learning (ML).

From the start, our goal has been simple. To equip the global research and innovation community with actionable, real-time insights that inspire smarter, faster decision-making.

By simplifying the complexities of patent & research landscapes, we provide our clients with the clarity they need to innovate boldly and maintain their competitive edge.

What began as a small startup has since grown into a trusted partner for organizations across a range of industries—from Al and biotech to energy, automotive, and beyond.

Our journey has been marked by a series of pivotal milestones, each of which has helped shape Incubig into the company it is today.



In our early days, we were driven by a belief in the potential of AI to revolutionize patent research, but we needed the resources and backing to bring our vision to life.

After securing vital grants, computing resources, and partnership support in 2019-2020, we were able to significantly expand our research and development efforts.

A key milestone during this period was being recognized by the South Korean Government's K-Startup Grand Challenge (KSGC), as among the top 10 Global Startups in 2019-2020.

We were also honored to be the first company incubated by the Government of India, through Niti Aayog's AIC-GIM, marking a pivotal moment in our growth.

In addition to receiving a grant from the South Korean government, we forged strategic partnerships with leading research organizations and institutes across South Korea.

This funding, combined with our expanding network, enabled us to strengthen our core product offerings and assemble a team of world-class experts in artificial intelligence, data science, and intellectual property law.

Funding and grants from IIT-ISM, TexMIn, DST, MeITY, and the Government of India, our collaborations with these institutions provided essential resources that fueled the development of our core products.

These supports laid the foundation for our continued success, allowing us to push boundaries in our technological development.



## One of Incubig Al first major breakthroughs

#### Do Your Research (DYR)

One of our first major breakthroughs came with the launch of our flagship product, Do Your Research (DYR), in 2021-2022.

This powerful platform redefined the way organizations approach patent intelligence, offering users access to a vast, real-time database of global patent activity like never before.

DYR quickly became a game-changer, empowering clients to track cutting-edge innovations, spot emerging trends, and pinpoint potential areas for R&D investment with unmatched precision.

The platform's Al-driven algorithms transformed complex patent landscapes into simple, clear, actionable insights, making it an indispensable tool for decision-makers in universities, startups, and corporations alike.



Advanced deep learning | ML | NLP | Patent knowledge | Proprietary algorithms

With a global team of data scientists, Al experts, IP experts contributing to our technology, we are automating patent research & analytics solutions.

Experience the ease of our platform, access valuable insights and predictions from a wealth of global research data.

Streamline your approach to patent analytics with Do Your Research – where advanced technology meets simplicity.

## Know the future landscape with DYR.

What truly set DYR apart was its ability to provide realtime updates on technological shifts, helping businesses stay ahead of the competition and make informed strategic moves.

Whether it was uncovering hidden opportunities in niche sectors or mitigating risks in saturated markets, DYR offered a new level of transparency and foresight.

The launch of DYR was a defining moment for Incubig, firmly establishing our presence in the patent research space.

With DYR, we didn't just respond to industry demands—we anticipated them, delivering a platform that seamlessly adapted to the fast-changing, innovation-focused landscape.

This marked the start of Incubig's leadership in patent intelligence, unlocking new opportunities for our clients and fueling the next wave of technological advancements.



#### Unlock the Power of Research Intelligence.

Use DYR to discover organisations, technologies, and innovators shaping the future.

Facebook, Inc Q



### Loved by the global Innovation community.

#### 2019-20

#### Recognized as one of the top 10 global startups by the South Korean Government at KSGC-2019.

- Honored to be the first company incubated by the Government of India, through NITI Aayog and AIC-GIM.
- Received incubation, grant, and funding support from the South Korean government.

#### 2021-22

#### Worldwide Research Network & Alliances, Expert Connections & Global Reach

- Collaborations with GOI, South Korean Govt, US Govt, & leading R&D Institutes.
- Funding and grants from IIT-ISM, TexMIn, DST, MeITY, GOI.

#### 2023-24

#### Introduced suite of tools for optimized intelligence gathering and insights

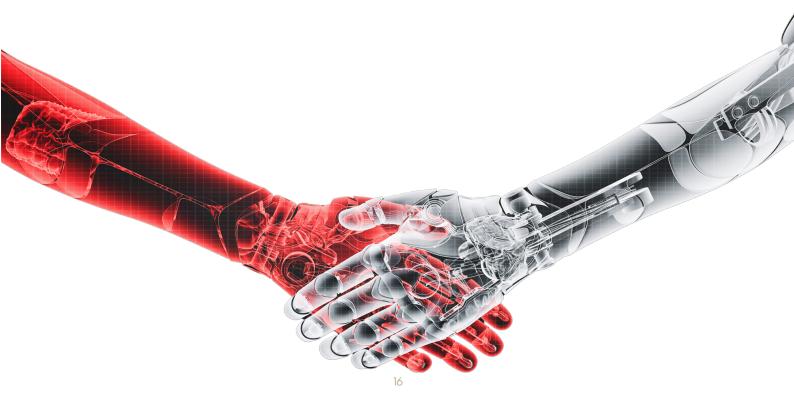
- Launched Do Your Research Platform (DYR), quickly adopted by leading universities, startups, and corporations.
- Released new products Monitor Your Competition (MYC) and Know Your Technology (KYC).

Partnered with IIT Alumni Council, expanding our reach into new markets and sectors.

This collaboration enabled us to tap into a broader range of industries, deepening our expertise and solidifying our reputation as a leader in patent research.

Secured multiple strategic partnerships with global research institutions and Fortune 500 companies, solidifying our position as a goto solution for patent intelligence across industries.

These partnerships have helped us expand our offerings and stay on the cutting edge of innovation.



Incubig has evolved from a bold idea into a thriving company that serves the needs of some of the world's most innovative organizations.

Our growth has been driven by our commitment to delivering cutting-edge solutions that make a tangible difference for our clients.



### Global Experts Behind building Incubig.

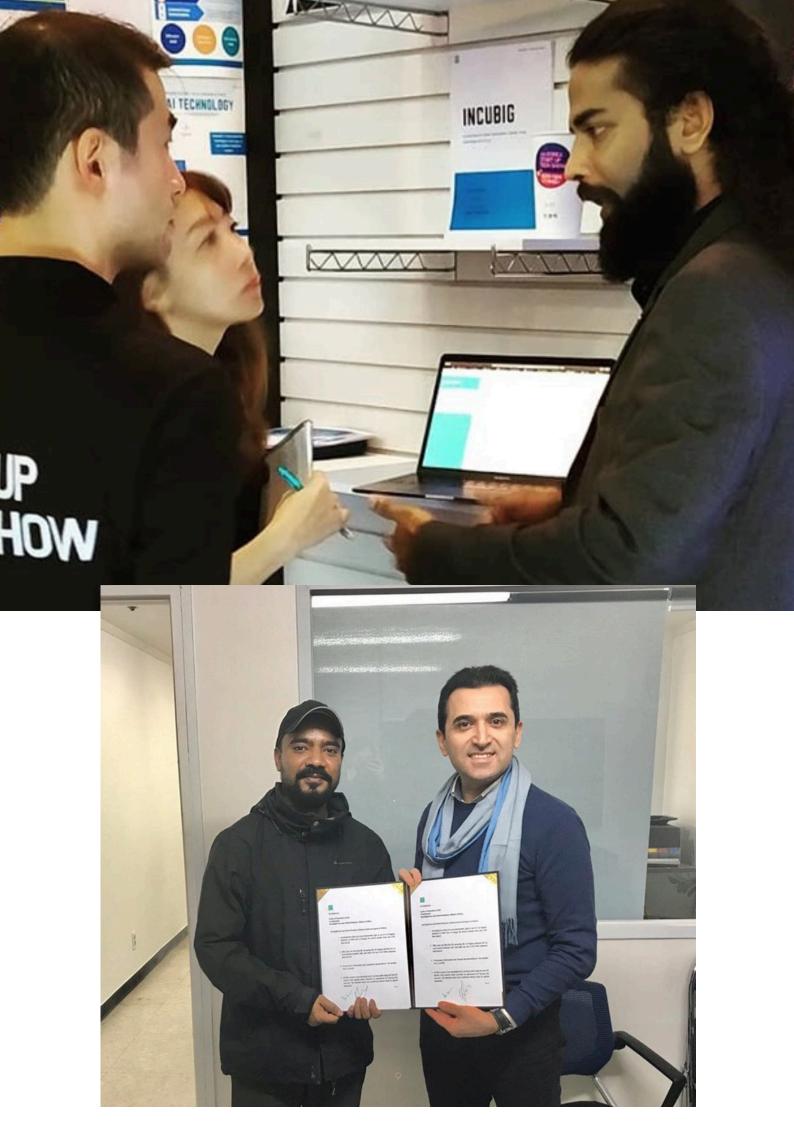
At the core of Incubig's success is our team—a diverse group of professionals who bring together expertise from a wide range of fields.

Our team is composed of specialists from around world in artificial intelligence, machine learning, data science, and intellectual property law, all of whom share a passion for innovation and excellence.

Our Al and machine learning experts are responsible for developing the powerful algorithms that underpin our products.

These algorithms analyze vast amounts of patent data in real-time, identifying trends, patterns, and potential opportunities for our clients.

By applying cutting-edge techniques like natural language processing and predictive analytics, we are able to offer insights that are both deep and actionable.



In addition to our technical team, we also have a group of seasoned intellectual property professionals who understand the intricacies of patent law and the challenges that organizations face in protecting their innovations.

Their expertise ensures that our products are not only technologically advanced but also aligned with the practical needs of our clients.

Moreover, our customer success and business development teams work closely with clients to ensure that they get the most out of our tools.

We believe that our success is tied to the success of our clients, and we take pride in helping them navigate the complex world of patent research.





#### Looking to the Future

As we look ahead, we are excited about the opportunities that lie before us.

The world of patents and intellectual property is vast and ever-evolving, and we see endless possibilities for how our solutions can transform the way organizations interact with this critical aspect of their business.

Our vision for the future extends beyond the tools we offer today.

We are committed to pushing the boundaries of what's possible in patent & research intelligence, developing more sophisticated Al-driven features that will provide deeper insights, faster analysis, and more strategic value to our clients.

Moreover, we recognize that the landscape of innovation itself is changing. With the rapid advancements in emerging fields like artificial intelligence, biotechnology, renewable energy, and quantum computing, the need for robust, actionable patent research has never been greater.



Our clients, ranging from early-stage startups to multinational corporations, are navigating this new frontier, and we are dedicated to being their trusted partner every step of the way.

We aim to provide them with the knowledge and tools they need to stay ahead of the curve and turn these innovations into competitive advantages.

#### **Empowering Our Clients to Innovate and Thrive**

At the heart of everything we do is our dedication to empowering our clients to innovate and thrive in a world that grows more complex and competitive by the day.

We understand that innovation is the lifeblood of progress—whether it's a groundbreaking new technology or an incremental improvement that makes a process more efficient.

By providing deep, data-driven insights into patent landscapes, we help organizations identify opportunities they may have otherwise missed, mitigate risks, and make informed decisions about where to invest their time, resources, and talent.





At Incubig, we remain committed to helping organizations not only survive in a competitive world but to thrive and lead it with groundbreaking innovation.

### Why Patent Research Matters?

In today's innovation-driven world, patent research is not just a tool for large corporations—it's essential for universities, startups, and even governments.

Each of these entities approaches innovation from different angles, but they all rely on a deep understanding of the patent landscape to fuel technological progress, protect intellectual assets, and maintain competitive advantages.

Whether it's identifying the next research frontier, preventing costly legal disputes, or driving national innovation agendas, patent research plays a crucial role in shaping the future.

In the fast-paced, innovation-driven landscape of modern business, staying ahead requires a deep understanding of the forces shaping the future.

Companies thrive or fall based on their ability to innovate, adapt, and protect their intellectual assets. At the heart of this effort lies patent research, a critical function that underpins innovation strategies for industries across the globe.

Far beyond its traditional association with legal protection, patent research is increasingly recognized as a vital source of competitive intelligence, driving strategic decisions, shaping R&D efforts, and fueling technological advancements.

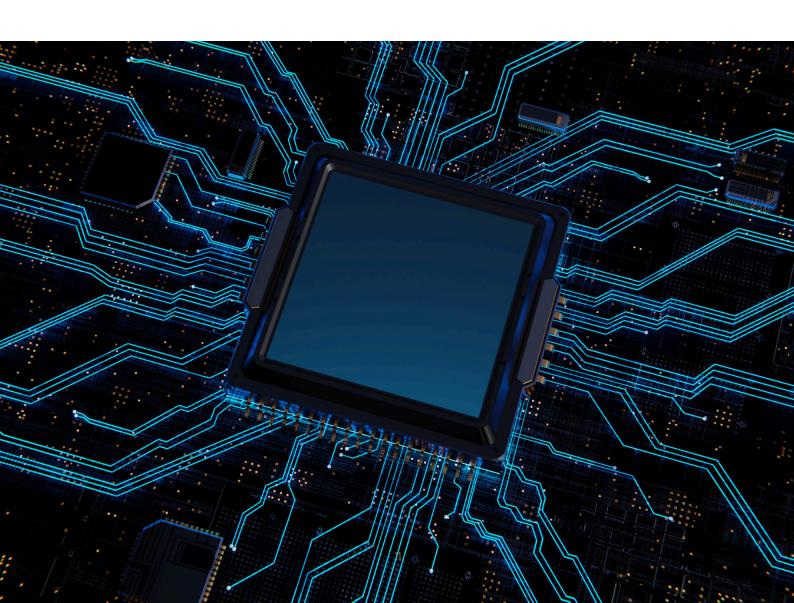
In a world where innovation defines success, patent research is the key to unlocking hidden opportunities.

It helps protect groundbreaking ideas, guides strategic growth, and drives impactful decisions—empowering institutions to shape the future of technology and industry.

## Universities for Fueling Research and Collaboration.

Universities are hubs of knowledge creation, driving the advancement of science, technology, and innovation through research.

Patent research is essential for universities as it enables them to contribute to cutting-edge discoveries and avoid reinventing the wheel.





#### Driving Breakthroughs in Research

For universities, patent research serves as a guide to the latest advancements in various fields, helping researchers identify gaps in existing knowledge and focus on untapped areas of study.

By analyzing global patent databases, university research teams can understand the technological landscape in their areas of expertise, spotting trends and emerging fields that require further exploration. This ensures that academic research remains relevant and contributes meaningfully to global technological progress.

For example, a university research team working on quantum computing can study patents in the field to understand which aspects of quantum technologies have already been explored.

They can then pivot their research efforts toward less-explored areas such as quantum encryption or hardware optimization, ensuring that their contributions are novel and impactful.



#### # 2

#### **Boosting Industry Collaboration**

Universities increasingly collaborate with industry partners to translate academic research into commercialized products.

Patent research helps bridge the gap between academia and industry by identifying potential areas for collaboration. Universities can identify patented technologies that are ripe for further development, then partner with corporations or startups to commercialize these innovations.

By understanding the patent landscape, universities can also negotiate better licensing agreements, ensuring that their inventions are properly protected while generating revenue for future research.

In the competitive realm of research funding, patent portfolios can also boost a university's reputation, attracting industry partners and funding opportunities.



#### Protecting Intellectual Property and Avoiding Infringement

In the academic world, where knowledge sharing is key, the boundary between open research and intellectual property protection can be delicate.

Universities must be careful not to infringe on existing patents while developing new technologies or publishing their findings.

Patent research helps universities navigate these complexities, ensuring that their innovations do not overlap with patented work, thus avoiding potential legal battles.

It also allows them to secure patents for their discoveries, safeguarding intellectual property that could lead to commercialization.

# Startups for continous Innovation, Competitive & Strategic Growth

For startups, innovation is the lifeblood of success. Patent research is critical for protecting their unique ideas, avoiding legal pitfalls, and gaining a competitive edge in highly dynamic markets.

In an ecosystem where many startups fail due to lack of proper IP strategy, patent research becomes a game-changer.





#### | 1 Fueling Innovation and Product Development

Patent research enables startups to identify "white spaces"—areas of innovation that have not yet been fully explored or patented.

By uncovering these gaps, startups can focus their R&D efforts on developing novel products that offer unique solutions, positioning themselves ahead of competitors in the marketplace. This approach also accelerates product development by ensuring resources are not wasted on reinventing existing technologies, allowing startups to bring innovative products to market faster.

For example, a startup in the biotech space could use patent research to discover unexplored areas in gene editing technologies.

With this insight, they can develop a product that addresses specific unmet needs in the market, giving them a head start in a rapidly growing field.



#### Monitoring Competition and Market Trends

Patent filings are a treasure trove of competitive intelligence. By tracking the patents being filed by competitors, startups can gain insight into their product pipelines, R&D focus areas, and strategic directions.

This allows startups to anticipate competitive moves, adjust their own product strategies accordingly, and identify emerging trends in the industry. Monitoring patent activity also reveals which technologies are gaining momentum, providing startups with critical information to stay ahead of the curve.

For instance, if a startup in the fintech sector observes a surge in patents related to blockchain and decentralized finance (DeFi) from competitors, it can strategically position itself to innovate in adjacent areas or develop complementary solutions to maintain relevance and capture market share.



#### 3 Securing a Competitive Edge with a Strong Patent Portfolio

A well-crafted patent portfolio acts as a powerful shield for startups, protecting their innovations from being copied by competitors.

Securing patents for key technologies not only fortifies their market position but also enhances investor confidence. Investors are more likely to fund startups with a clear intellectual property strategy, as a strong patent portfolio indicates a reduced risk of IP-related disputes and a commitment to innovation.

For example, consider a startup in the electric vehicle (EV) sector that develops a novel battery technology with improved energy density and faster charging times.

By securing patents on this technology, the startup not only safeguards its innovation from potential infringement but also signals to investors that it has a defensible market position.

As a result, the startup attracts interest from venture capitalists and strategic partners, ultimately leading to opportunities for collaboration with established automotive manufacturers looking to enhance their EV offerings.

# Corporations for Maintaining Market Leadership and Driving R&D Efficiency

For established corporations, patent research plays a pivotal role in maintaining market leadership, driving innovation, and maximizing returns on R&D investments.

In highly competitive industries, where innovation cycles are short and new technologies emerge rapidly, patent research ensures corporations remain at the cutting edge of their fields.





#### Staying Ahead of Competitors

In industries such as technology, pharmaceuticals, and manufacturing, corporations constantly innovate to stay ahead of competitors. Patent research provides corporations with valuable insights into the R&D activities of their rivals, enabling them to anticipate market trends and outpace competitors.

By tracking competitors' patent filings, corporations can gauge where the industry is heading and adjust their strategies accordingly.

For example, a leading pharmaceutical company might use patent research to identify emerging drug candidates being developed by competitors.

Armed with this information, the company can accelerate its own drug development efforts or pursue licensing agreements for promising compounds. This proactive approach ensures that the corporation remains a leader in its industry.



#### Enhancing R&D Efficiency and Avoiding Redundancies

Corporations invest heavily in R&D, but without a clear understanding of the existing patent landscape, they risk duplicating efforts already covered by existing patents.

Patent research enables R&D teams to identify unexplored areas of innovation, ensuring that their efforts are focused on creating truly novel products.

By leveraging global patent databases, corporations can also foster collaboration between their R&D teams and external partners.

For example, a multinational technology company can use patent research to identify research areas where collaborations with universities or startups would be beneficial, enhancing innovation while reducing time-to-market for new products.



#### # 3 Monetizing IP Through Licensing

For large corporations, patent portfolios are not just about protection—they are valuable assets that can generate revenue through licensing agreements.

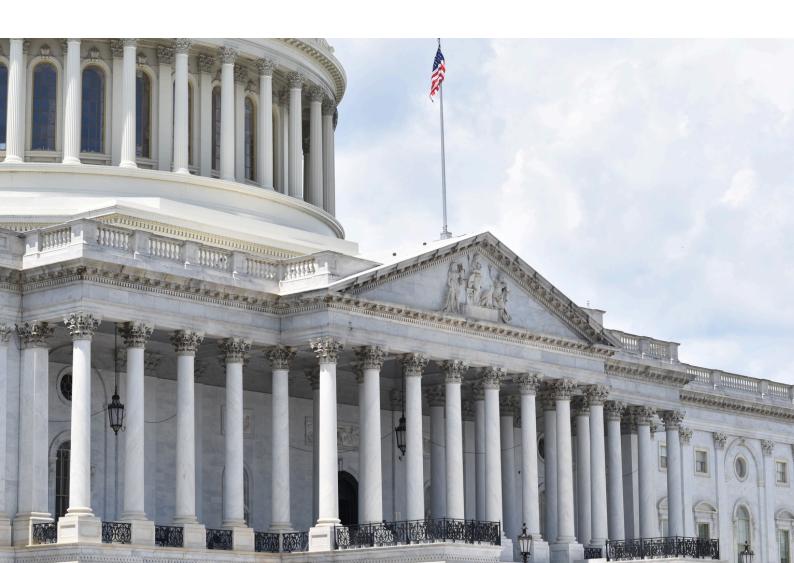
Patent research helps corporations identify potential licensees for their technologies, creating new revenue streams without the need for direct commercialization.

This strategy is particularly effective in industries like telecommunications, where companies like Qualcomm have generated billions through the licensing of their patented technologies.

# Governments for Driving National Innovation and Economic Growth

Governments play a critical role in shaping national innovation agendas, fostering technological progress, and ensuring economic competitiveness.

Patent research is a strategic tool for governments, helping them monitor technological advancements, guide policy decisions, and support innovation ecosystems.





#### Shaping National Innovation Strategies

Governments need a clear understanding of global patent trends to shape national innovation policies.

By analyzing patent data, governments can identify the key technologies driving economic growth and invest in areas that will enhance national competitiveness.

For example, a government aiming to become a leader in green energy might use patent research to identify emerging innovations in renewable energy technologies, guiding public investment in R&D and infrastructure.



#### $\not\parallel$ 2 Protecting National Interests in Global Trade

In an era of globalized trade, protecting national interests in key industries is a top priority.

Patent research allows governments to monitor the patenting activities of foreign companies and governments, ensuring that domestic industries are not left behind in key technological areas.

For instance, by studying patent trends in semiconductors, a government can assess its country's position in the global supply chain and take steps to bolster domestic production capacity.



## 3 Supporting SMEs and Academic Institutions

Governments also play a role in supporting startups, SMEs, and academic institutions through patent research.

By providing access to global patent databases and resources, governments can empower smaller entities to protect their innovations, avoid IP disputes, and drive national economic growth.

Government programs that offer patent research support and funding for IP protection are particularly valuable for startups and universities looking to commercialize their innovations.



## 4 Guiding Policy and Regulatory Frameworks

Patent research helps governments create policies that promote innovation while protecting intellectual property rights.

By understanding global patent trends, governments can develop regulatory frameworks that strike a balance between encouraging technological advancements and safeguarding public interests.

In the realm of healthcare, for instance, patent research can inform policies that ensure access to life-saving medicines while promoting pharmaceutical innovation.

## The Global Impact of Patent Research on Innovation is immense.

Patent research is a critical tool for every entity engaged in the innovation ecosystem—universities, startups, corporations, and governments alike.

Each of these entities relies on patent insights to protect their intellectual property, foster technological advancements, and maintain a competitive edge in their respective fields.

Whether it's shaping national policy, driving corporate R&D, protecting startup innovation, or advancing academic research, patent research is the linchpin that connects creativity to commercialization and strategy to success. In a world where innovation is the key to solving global challenges and driving economic growth, the importance of patent research cannot be overstated.

It is the essential foundation upon which the future of technology and progress is built.



## Do Your Research (DYR) is Incubig's Key to Unlocking Global Research intelligence.

Do Your Research (DYR) is Incubig's premier product, designed to equip businesses, universities, startups, and governments with exceptional intelligence.

Providing in-depth, data-driven insights, DYR revolutionizes the way individuals and organizations tackle research, innovation, and competitive analysis.

Powered by advanced AI and featuring easy access with a simple search interface, the platform empowers users to identify emerging technologies, monitor competitive dynamics, and uncover crucial trends, positioning them at the leading edge of industry advancements.



## At its core, DYR is more than just a research tool.

At its core, DYR is more than just a research tool—it's a catalyst for transformation.

With real-time intelligence, users can explore new markets, discover emerging technologies, identify key players in specific fields, and even predict where future innovations will arise.

DYR empowers innovation by providing organizations with the tools to uncover key technological trends, discover competitive shifts, and make informed decisions that shape the future of their industries.

The platform offers a seamless, AI-powered experience that accelerates research, giving businesses, universities, and startups the ability to stay ahead of the curve.



Use DYR to discover organisations, technologies, and innovators shaping the future.

Facebook, Inc Q



## Transform Your research with DYR

## **Insightful Trends and Intelligence**

Track emerging technologies and research trends to identify growth opportunities for universities, startups, and corporations, while enabling governments to develop datadriven policies.

## **Competitive Analysis**

Compare research impact and innovation efforts across institutions and industries, helping startups refine their models, corporations assess their positions, and governments enhance policy-making

## Forecasting important decisions

Utilize predictive insights to align future research directions, inform investment choices, and anticipate industry shifts, empowering all users to make effective decisions.

## Use DYR to Discover Organizations Shaping the Future

One of the most powerful features of Do Your Research (DYR) is its ability to help users uncover and analyze key organizations driving innovation globally.

Whether you're a startup looking to partner with established industry leaders, a corporation seeking to invest in emerging players, or an academic institution wanting to collaborate with top innovators, DYR provides the insights needed to identify the right organizations at the right time.



## Organization

Sz dji technology co., ltd.

Baidu online network technology (beijing

Autel robotics co., ltd.

Sz dji technology co., Itd

Hangzhou zero zero technology co., ltd.

## DYR scans key data points from millions of patents, research papers, and technical documents

DYR scans key data points from millions of patents, research papers, and technical documents to highlight companies, universities, and research institutions leading the charge in specific technologies.

By pinpointing who's filing the most patents or conducting groundbreaking research, you can identify potential collaborators, competitors, or investment opportunities.

Biohealthcore inc.	Robert bosch gmbh	Apple inc.
South Korea	Germany	USA
Industry Focus	Industry Focus	Industry Focus
Sports	Vehicles	Computational Technology
Mensuration	Computational Technology	Communication Technique
Technologies Developed	Technologies Developed	Technologies Developed
1	7441	6378
Top Inventor	Top Inventor	Top Inventor
Hyo taek lee	Stefan nordbruch	Dawei zhang

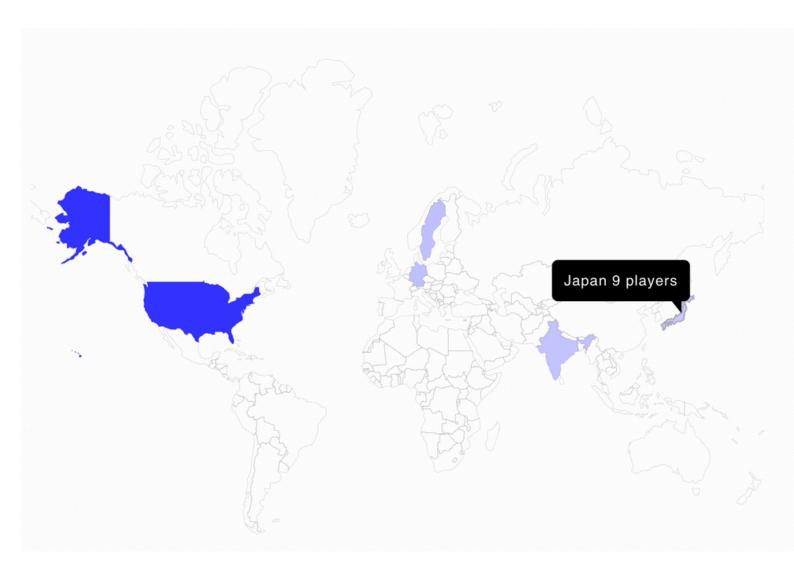
## **Track New Entrants and Startups**

Track new Entrants and Startups Stay ahead of the competition by identifying new players entering your market.

DYR's market intelligence enables you to track startups making waves in emerging technologies, giving you a first-mover advantage for partnerships, acquisitions, or investments.

### Top active organisations (India)

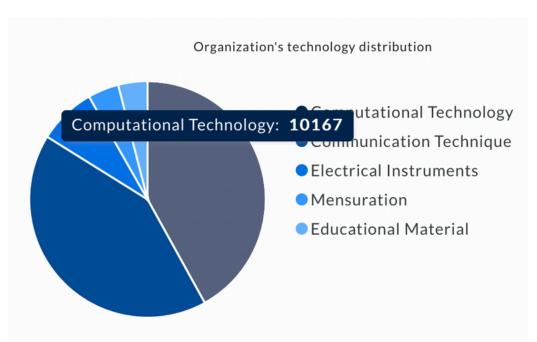
Organization	Recent Patents
Tata consultancy services limited	2
Chandigarh university	1
Dimension nxg private lilmited	1
Dimension nxg private limited	1
Rn chidakashi technologies private limited	1



## **Get Global Access**

DYR's global data sources allow you to explore organizations across geographies, whether you're interested in technology hotspots in Silicon Valley or untapped innovation clusters in Asia or Europe.

You'll gain insights into key players regardless of their location, helping you connect with organizations shaping innovation worldwide.



Technologies	Patent Count
Details related to the display arrangement, including those related to the mounting of the display in the housing	10167 new patents
With means for limiting noise, interference or distortion	10155 new patents
With a plurality of light emitting regions, e.g. laterally discontinuous light emitting layer or photoluminescent region integrated within the semiconductor body	1912 new patents
Self-interferometers,	1026 new patents
With pixel circuitry controlling the current through the light-emitting element	969 new patents

## **Assess Technology Strengths**

By analyzing patent portfolios and research outputs, DYR helps you understand an organization's technology strengths.

Whether you're assessing competitors or looking for R&D partners, DYR gives you a clear view of who's excelling in areas that align with your strategic goals.



Incubig's solution & platform is needed in South Korea.

One of the most impactful company, signed MoUs and joint venture agreements with leading corporations.

## Gain Deep Intelligence on Emerging and Evolving Technologies

Staying informed about the latest advancements in technology is critical for organizations looking to innovate and maintain a competitive edge.

With Do Your Research (DYR), you can access cutting-edge insights into the technologies shaping the future.

Whether you're in R&D, strategy, or business development, DYR provides powerful intelligence to help you navigate the fast-paced world of technological innovation.



## Track Emerging and High-Growth Technologies in Real-Time

DYR helps you monitor the development of emerging technologies as they unfold, giving you real-time insights into fields like Al, biotechnology, and quantum computing.

By analyzing patents, research papers, and global R&D efforts, DYR identifies high-growth areas where innovation is accelerating, helping you stay ahead of the competition and make strategic investments.

Name	Industry	Inventor	Patents
Machine Learning	Computing	Charles Howard Cella	26766
Automatic pilot	Aviation	Donald R. High	12889
Fuel cells	Electric Elements	Joachim F. OPPELT	14
Biological computer models	Computing	Jeffrey P. McGuckin	959
Cardiovascular drugs	Medical Science	Dorian Bevec	4092



## Accelerate R&D and Drive Technology Development:

DYR enables organizations to streamline their research and development processes.

By providing an overview of the latest technological breakthroughs and advancements, DYR helps you focus on the most promising technologies, reducing time-to-market and boosting the efficiency of your innovation efforts.

Whether you're developing new products or enhancing existing technologies, DYR offers actionable data to accelerate technology development.



Control of position, course or altitude of land, water, air, or space vehicles, e.g. automatic pilot Update

12889 patents filed | 52 countries working | 2386 active organizations

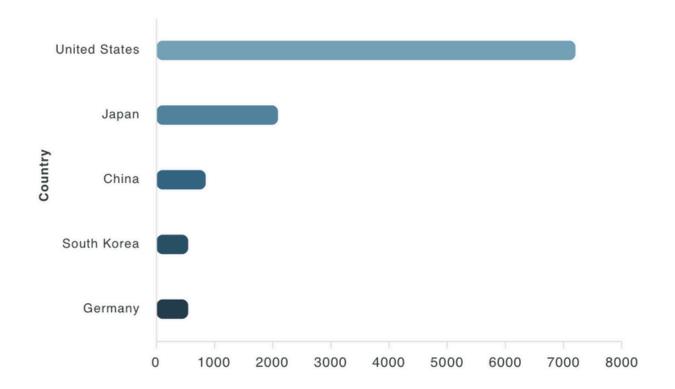
Overview Dataset Trends Global

Technology Monitoring | Global

### View global activity

Leading global research hubs include US, followed by JP and CN. Noteworthy patent filers like Toyota jidosha kabushiki kaisha drive innovation worldwide.

- US is leading the research followed by JP and CN.
- Toyota jidosha kabushiki kaisha is the top patent filer, with 592.



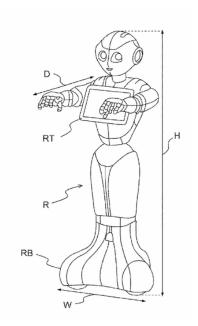
## Access Key Technology Trends and Breakthroughs

DYR gives you instant access to the latest technology trends, tracking growth in emerging fields and uncovering key players driving innovation.

It helps you stay ahead by highlighting recent technological inventions and breakthroughs, enabling smarter R&D, investment, and strategic decisions.

With DYR, you can pinpoint high-growth areas and make informed moves in today's fast-evolving tech landscape.

/5 Countries 5213 Organizations 55763
Inventors



# Electric vehicle (ev) fast recharge station and system The noco company | Vehicles | 2020 | US An electric vehicle (EV) charging station for fast charging (e.g. 5 to 15 minutes) an electric vehicle (EV). The EV charging station can be configured to charge multiple EVs and mu... Electric vehicle (ev) charging station management Honda motor co., Itd. | Vehicles | 2020 | JP According to one aspect, a system for electric vehicle (EV) charging station management may perform receiving an indication of an EV of a user initiating charging at an EV charging...



## Naresh Soni Chief Executive Officer @ DeepMatrix

DYR has been a valuable resource for us at DeepMatrix. It provided clear insights into emerging technologies and patents, helping us stay ahead in Big Data analytics, GIS, and drones.

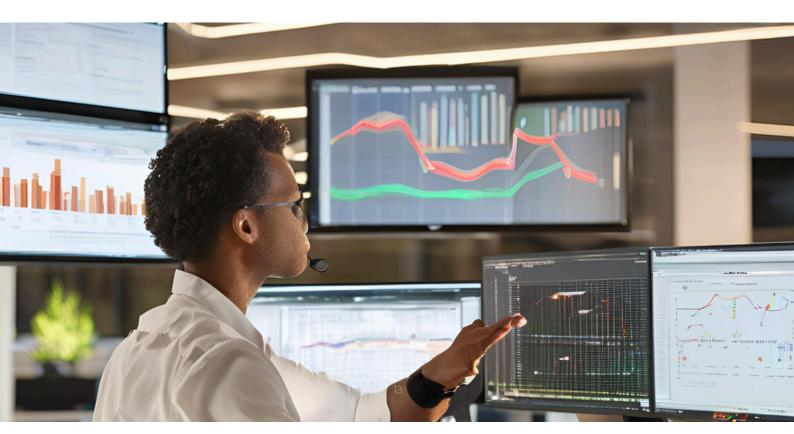
The platform made our research easier and supported our growth strategy. I highly recommend DYR for any startup focused on innovation.

# DYR helps in. Navigating and utilizing research data with ease

Do Your Research (DYR) offers seamless access to essential research data, converting it into clear and actionable insights.

Powered by advanced AI, DYR enables users to explore billions of data points from patents, research papers, and technical documents, facilitating the discovery of emerging technologies and monitoring the innovations that are defining the future.

With DYR, you can effortlessly navigate the landscape of research data to identify top innovators, their groundbreaking inventions, and the trends shaping your industry





#### **Recent Innovations**

## Advanced robotics for manufacturing automation

Future tech co.| Manufacturing| 2022| Germany

#### Smart wearable health monitor

Healthtech innovations| Healthcare | 2024 | Canada

## Next-generation battery technology

Energy solutions inc.| Energy storage| 2023| Australia

## **Effortless Access to Research Data**

DYR provides seamless access to billions of data points from patents, research papers, and technical documents, allowing users to uncover emerging technologies and track critical innovations.

## **Identify Top Innovators**

With DYR, users can easily access key patents, such as Arctop Ltd.'s 2020 filing for a brain-computer interface, and discover other innovators in similar fields, gaining insights into their technological impact and research trajectories.

## **Build Your Strategy**

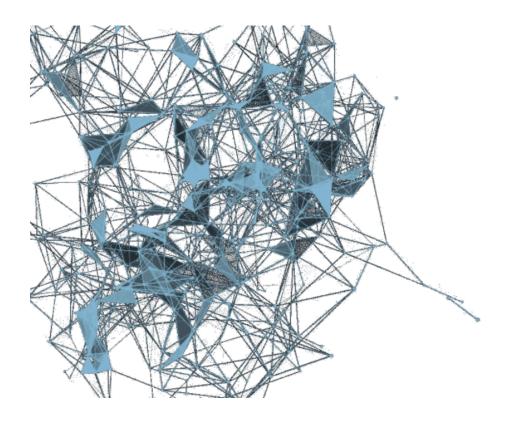
By simplifying the navigation of research data, DYR empowers universities, startups, corporations, and governments to identify innovations, seize strategic opportunities, and remain competitive in a rapidly evolving tech landscape.



## **Alfonso lñiguez,**Founder, Swarm Technology

I truly believe that Incubig provides a valuable and much needed service. To my company, and perhaps other companies in my situation.





## Personalised DYR Experience

One of Incubig's Technologies greatest strengths is its ability to adapt its, data, insights, intelligence & tools to access them adapt to the unique needs of various clients.

Whether you're a startup looking to innovate, a university conducting cutting-edge research, or a corporation seeking a competitive advantage, Incubig's suite of products delivers tailored intelligence to help you achieve your goals.

## 1 Universities: Empowering Academic Research

Universities play a pivotal role in global innovation by advancing research and developing new technologies.

However, navigating the world of patents and research trends can be daunting for academic institutions.

Incubig's products provide a solution that empowers universities to focus their efforts on impactful research, fostering collaboration with industry and maximizing the commercial potential of their discoveries.

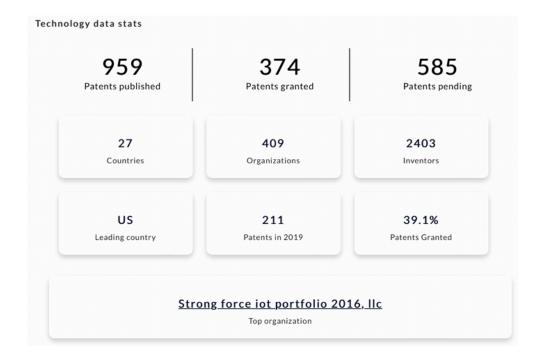
## Q: What are the latest trends and leaders in Biological Computer Models?

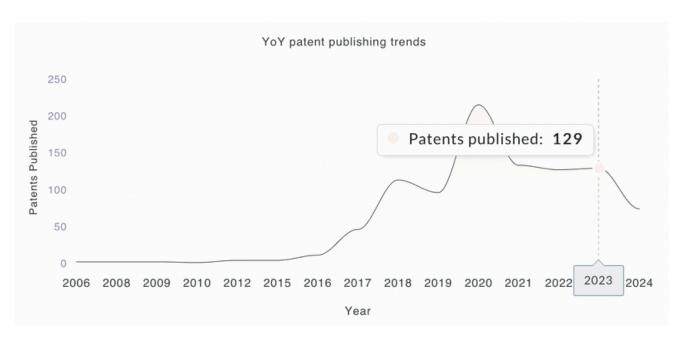
#### DYR:

In 2019, research in Biological Computer Models surged globally, with 27 countries actively innovating in this field.

The United States emerged as the leader in research activities, followed closely by Japan.

Notably, Strong Force IOT Portfolio 2016, LLC filed 84 patents recently, underscoring the active development within this sector.





Global activity under the technology

27 409 2403
Countries Organizations Inventors

In 2019, there was a significant surge in research activity in the field of Biological Computer Models, with 211 patents filed globally.

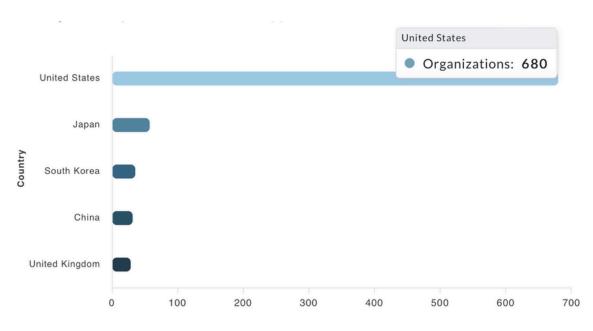
Of these applications, 39.1% were granted, marking a productive year for innovation in this domain.

The high number of filings in recent years reflects growing interest and advancements in integrating biological principles with computational models.

## Q: Who is leading the global research in Biological Computer Models?

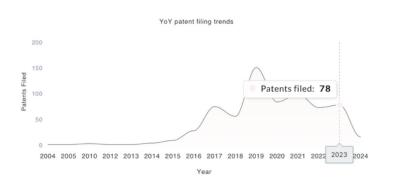
### DYR:

The United States is currently leading global research in Biological Computer Models, followed closely by Japan and South Korea as major research hubs



Top five countries, based on number of organizations

A total of 680 patents have been filed from the United States, with Armonk leading as the top city for patent filings, followed closely by Santa Monica.



### **Top Locations**

#### Armonk

77 patents

#### Santa monica

65 patents

### Mountain view

46 patents

### Redmond

34 patents

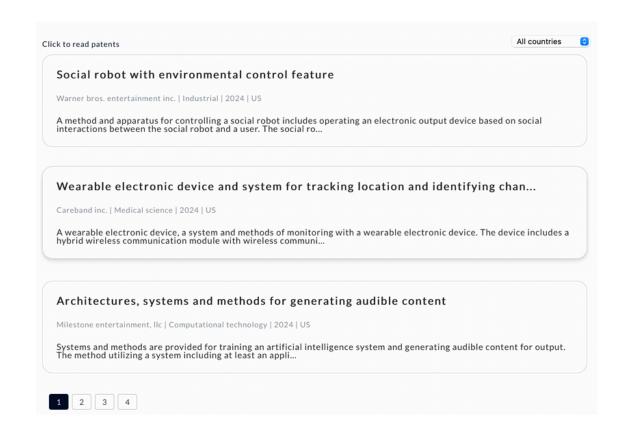
## San francisco

34 patents

## Q: What are the latest technologies being developed in the field of Biological Computer Models?

#### DYR:

In recent years, cutting-edge technologies in Biological Computer Models have seen a surge in innovation. Advancements in Al-driven simulations of biological processes, bio-inspired computing systems, and synthetic biology integration are gaining traction





## Dheeraj Kumar

Dy. Director, IIT (ISM) Dhanbad, Director, TEXMiN Foundation

Do Your Research (DYR) has significantly enhanced our research capabilities at IIT (ISM) Dhanbad, TEXMIN.

Ease of access to invaluable insights, enabling us to identify emerging technologies and strengthen our collaborations effectively.

# 2 Startups: Accelerating Innovation and Reducing Risks

For startups, especially those in tech-driven industries, innovation is critical to survival and growth.

However, building cutting-edge products comes with risks, particularly in terms of intellectual property and competition.

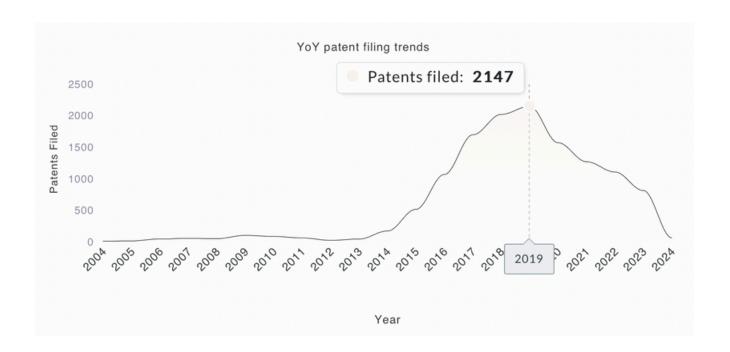
Incubig's products help startups navigate these challenges by providing insights into emerging technologies, competitive landscapes, and patent risks.

## Q: Is my technology worth pursuing?

#### DYR:

According to recent data from 2019, 2147 patents were filed in the automatic pilot industry, indicating high research and innovation activity.

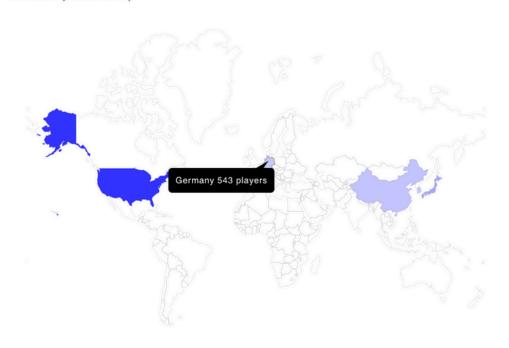
Of these, 49.8% were granted, which suggests that a significant portion of the filed patents are seen as viable and novel.



This level of patent activity highlights the continued relevance and growth potential of the technology.

The US leads global research in this field, followed closely by Japan and China.

#### Click country to see activity



## Q: What is Germany doing in my technological area?

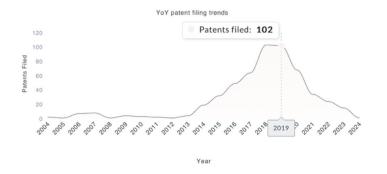
#### DYR:

Germany is playing a significant role in the automatic pilot industry with 128 organizations contributing to innovation.

The country has an impressive 1401 inventors actively filing patents. Research activity peaked in 2018, a standout year for German innovation in this field.

This demonstrates Germany's strong presence, and major companies like Robert Bosch GmbH are leading the charge.

A total of 544 patents have been filed from Germany, with Stuttgart leading as the top city for patent filings, followed closely by Wolfsburg.



#### **Top Locations**

#### Stuttgart

173 patents

### Wolfsburg

54 patents

## Muenchen

40 patents

### Ingolstadt

23 patents

### Bietigheim-bissingen

15 patents

#### Top active organisations (Germany)

Organization	Recent Patents
Robert bosch gmbh	153
Volkswagen aktiengesellschaft	40
Bayerische motoren werke aktiengesellschaft	33
Audi ag	26
Valeo schalter und sensoren gmbh	15

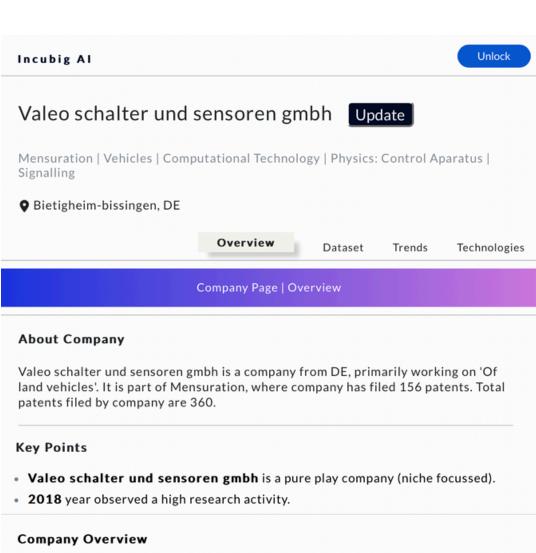
## Q: What is Valeo Schalter und Sensoren GmbH doing in this space?

#### DYR:

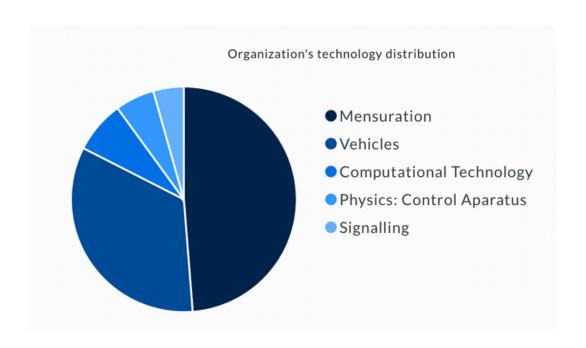
Valeo Schalter und Sensoren GmbH, based in Germany, is a specialized company primarily focused on technologies for land vehicles.

They are an expert in the field of Mensuration, having filed a total of 360 patents, with 156 patents specifically related to this area.

The year 2018 marked a peak in their research activity, highlighting their commitment to innovation in automotive technologies.







Valeo Schalter und Sensoren GmbH is primarily focused on research related to land vehicles, with additional efforts in developing systems for the automatic or assisted adjustment of the relative position of charging devices and vehicles.

Technologies	Patent Count
Of land vehicles	156 new patents
Means for automatic or assisted adjustment of the relative position of charging devices and vehicles	108 new patents
Recognising traffic signs	24 new patents
For transition from automatic pilot to manual pilot and vice versa	18 new patents
Where the received information does not generate an	14 new patents

#### Q:What are some of the recent inventions published in my field?

#### DYR:

Recent inventions in the automatic pilot industry include innovative technologies aimed at enhancing vehicle automation and safety.

For example, Waymo LLC is primarily focusing on advancements in means for monitoring or calibrating vehicle systems, as well as developing solutions for taking automatic action to avoid collisions, such as braking and steering mechanisms.

Click to read patents

All countries

#### Emergency signaling in autonomous trucking systems

Waymo IIc | Physics: control aparatus | 2024 | US

Aspects and implementations of the present disclosure relate to performance and safety improvements for autonomous trucking systems, such as reactive suspensions for maximizing aer...

#### Backup navigation system for unmanned aerial vehicles

Wing aviation IIc | Physics: control aparatus | 2024 | US

Described is a method that involves operating an unmanned aerial vehicle (UAV) to begin a flight, where the UAV relies on a navigation system to navigate to a destination. During  $t\dots$ 

#### System and method for aerial traffic management of unmanned aerial vehicles

Flytrex aviation Itd. | Physics: control aparatus | 2024 | IL

A system and method for aerial traffic management of unmanned aerial vehicles (UAVs) are provided. The method includes receiving at least a navigation request from a first UAV of a...



## Kalash Nibjiya

CTO & Co-Founder, Bidaal Tech

"Incubig played a key role in helping us file and secure valuable patents at Bidaal Tech.

Their insights guided our product development strategy, ensuring our innovations were protected and aligned with our goals.

## Governments: Shaping Policy and Fostering Innovation

Governments play a crucial role in shaping the policies that drive technological advancements and economic growth.

By leveraging patent research tools, governments can identify emerging trends, assess national and global research activity, and craft informed policies to support innovation.

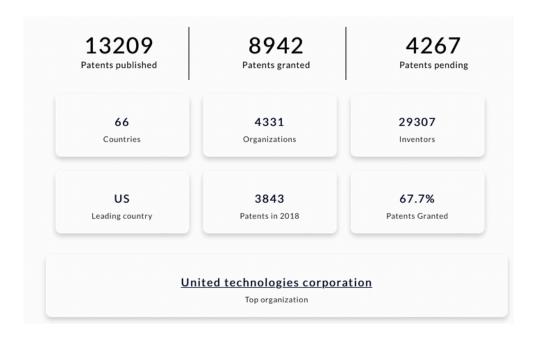
Incubig's products help governments make data-driven decisions, ensuring they stay ahead in fostering innovation ecosystems, protecting intellectual property, and driving technological competitiveness.

## Q: How is our country performing in climate change mitigation and adaptation technologies compared to global leaders

#### DYR:

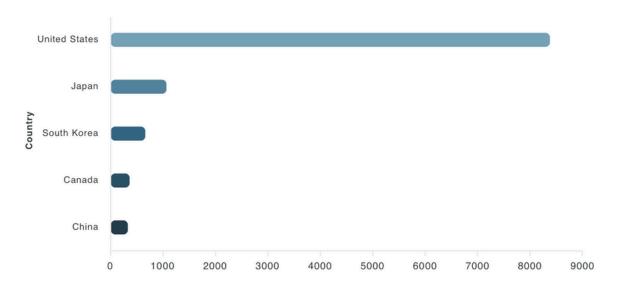
In 2018, research in climate change mitigation and adaptation technologies surged globally, with 66 countries actively innovating.

The U.S. leads the research, followed by Japan. One of the key players, United Technologies Corporation, filed 251 patents in recent years, showcasing its commitment to clean energy solutions.



The U.S. leads in research activity, with Japan and South Korea closely behind.

United Technologies Corporation stands out as the leading patent filer, with 251 patents.



Top five countries, based on number of organizations

## Q: Which organizations and institutions are leading research in climate change mitigation and adaptation technologies in India?

#### DYR:

India has seen growing research activity in climate change mitigation and adaptation technologies. 35 organizations are actively involved, with 450 inventors contributing to this field.

The year 2018 marked the peak of research activity, with 31.7% of the patents being granted.

Shoolini University stands out as the top organization leading this innovation effort in India.

35 Organizations 450 Inventors

17
Patents in top year

**31.7%**Patents Granted

#### Shoolini university

Top organization

#### Top active organisations (India)

Organization	Recent Patents
Shoolini university	3
Council of scientific & industrial research	3
Amrita vishwa vidyapeetham	2
Thermax limited	2
Cipla limited	2

## Q: What is the Council of Scientific & Industrial Research (CSIR) working on regarding climate change?

#### DYR:

The Council of Scientific & Industrial Research (CSIR), based in India, is actively engaged in innovative research primarily focusing on the reaction of organic compounds with carbon dioxide, particularly in processes like Kolbe-Schmitt synthesis. The organization has filed a total of 2,435 patents, with 736 specifically in this area.

In 2015, CSIR experienced a surge in research activity, filing 316 patents, and achieving a grant rate of 16.1% for its patent applications.

Additionally, they are exploring advancements in macromolecular materials, contributing to India's growing expertise in climate change mitigation and adaptation technologies.

#### Top technologies (click to view)

Technologies	Patent Count
By reaction of organic compounds with carbon dioxide,	273 new patents
e.g. kolbe-schmitt synthesis	273 flew paterits
Macromolecular materials	256 new patents
Containing mineral polymers, e.g. geopolymers of the davidovits type	248 new patents
Noble metals	130 new patents

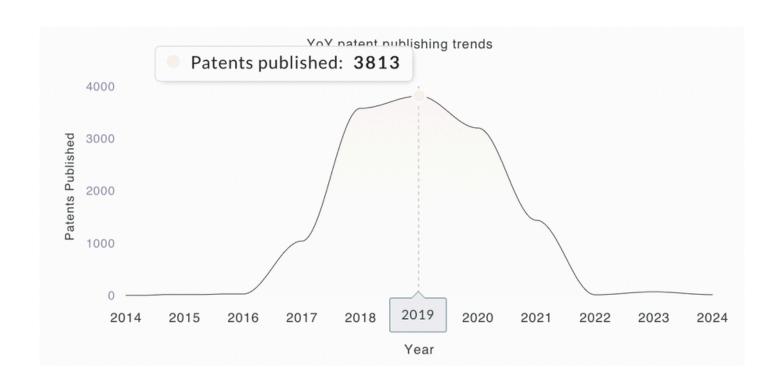
## Q: What are the current publication trends in climate change mitigation and adaptation?

#### DYR:

In 2018, there was a significant surge in research activity, with a total of 3,843 patents filed globally in the field of climate change mitigation and adaptation.

Notably, 67.7% of these patent applications were granted, indicating a strong trend toward innovation and advancement in this crucial area.

The high volume of patents reflects the increasing commitment to developing effective solutions to combat climate change and enhance adaptation strategies.





## Dr. Divya Rajput

CEO, JSS Science & Technology Entrepreneurs Park

DYR has been transformative for our startup and incubator. It helps us identify market gaps and speed up our innovation process.

It also helps us navigate government funds and policies effectively, aligning our projects with available support and enhancing our impact in the startup ecosystem.

# 4 Corporations: Strengthening Innovation and Strategic Planning

Large corporations often have vast R&D efforts, but staying ahead in competitive industries requires constant innovation and vigilance.

Incubig's tools provide corporations with the intelligence they need to refine their R&D strategy, monitor competitors, and forecast technological shifts.

## Q: What is DeepMind Technologies' latest research?

#### DYR:

DeepMind Technologies Limited, based in Great Britain, is at the forefront of innovation in the field of learning methodswithin computational technology. The company has filed a total of 349 patents to date, showcasing its commitment to advancing artificial intelligence and machine learning.

In 2024, DeepMind made headlines by filing a patent focused on augmenting machine learning language models using search engine results.

This groundbreaking research aims to enhance the performance of Al models by integrating real-time data from search engines, potentially leading to more accurate and context-aware language processing capabilities.

Click to read patents

All inventors

#### Augmenting machine learning language models using search engine results

Wojciech jan stokowiec | Computational technology | 2024 | GB

Methods, systems, and apparatus, including computer programs encoded on computer storage media, for augmenting machine learning language models using search engine results. One of ...

#### Black-box optimization using neural networks

Yutian chen | Computational technology | 2024 | GB

Methods and systems for determining an optimized setting for one or more process parameters of a machine learning training process. One of the methods includes processing a current...

#### Animating images using point trajectories

Carl doersch | Computational technology | 2024 | GB

Methods, systems, and apparatus, including computer programs encoded on computer storage media, for animating images using point trajectories.

## Q: Who is the top inventor at DeepMind Technologies, and what is their latest research?

#### DYR:

The top inventor at DeepMind Technologies Limited is Oriol Vinyals.

In 2019, he was particularly active, contributing to 46 patents across 10 different industries and focusing on 125 unique technologies.

His recent research focuses on generating audio using neural networks and multi-agent reinforcement learning.



Click to read patents

Oriol vinyals 😌

#### Graph neural network systems for generating structured representations of object...

Oriol vinyals | Computational technology | 2023 | GB

There is described a neural network system for generating a graph, the graph comprising a set of nodes and edges. The system comprises one or more neural networks configured to rep...

#### Multi-agent reinforcement learning with matchmaking policies

Oriol vinyals | Computational technology | 2023 | GB

Methods, systems, and apparatus, including computer programs encoded on a computer storage medium, for training a policy neural network having a plurality of policy parameters and ...

#### Computer code generation from task descriptions using neural networks

Oriol vinyals | Computational technology | 2023 | GB

Methods, systems, and apparatus, including computer programs encoded on computer storage media, for generating computer code using neural networks. One of the methods includes rece...

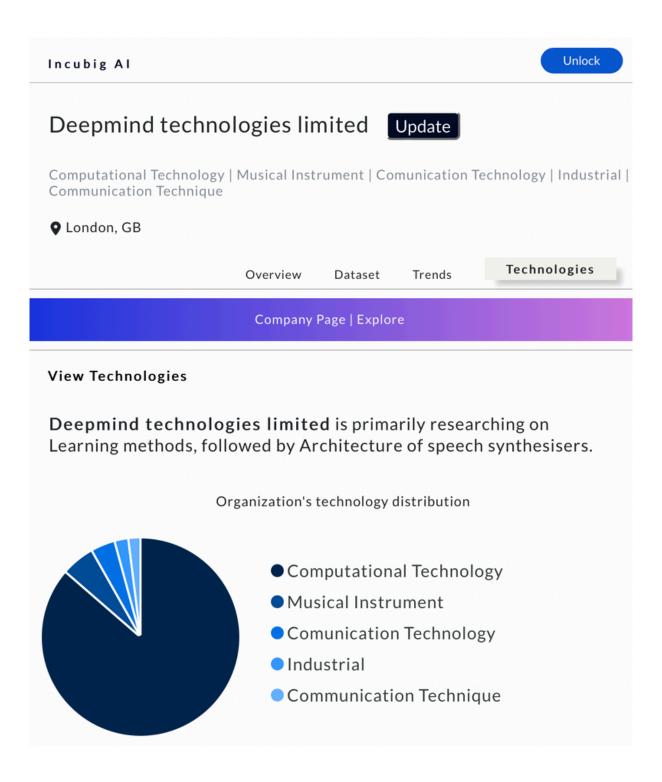
## Q: What are some research trends observed at DeepMind Technologies?

#### DYR:

In 2019, a total of 81 patents were filed, reflecting a year of high research activity in the field.

Notably, 25.4% of the patent applications submitted that year were granted.

This indicates a robust innovation landscape, with significant efforts being made to develop new technologies and solutions.





#### **Ketan Chandra**



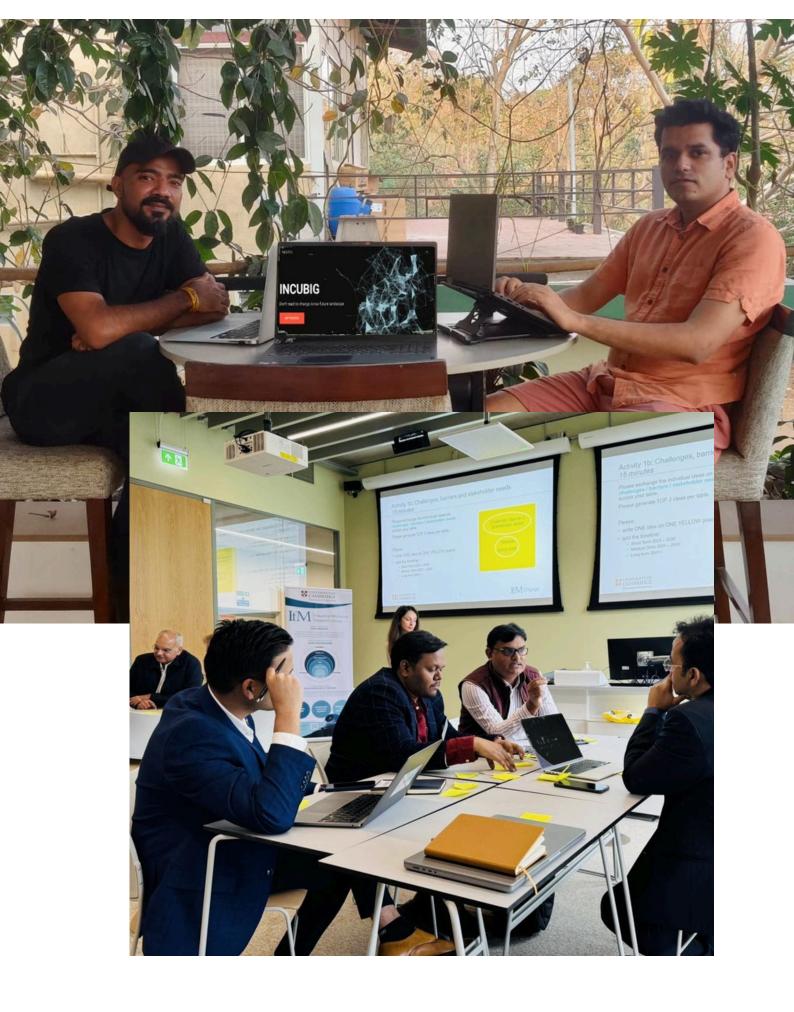


At Incubig, we're turning complex data into clear, actionable insights that empower innovators to make informed decisions. By leveraging AI and machine learning, we're not only analyzing patents but unlocking hidden value within them. Our mission is to simplify research intelligence, driving forward the possibilities for R&D and beyond.

Ketan Chandra, an alumnus of IIT Madras and Technology Head at Incubig, is pivotal in advancing the company's Al-powered research intelligence platform.

With deep expertise in building scalable B2B solutions, he harnesses AI, NLP, and machine learning models to process vast patent datasets, providing actionable insights that drive innovation.

His work ensures Incubig's products deliver accurate, data-driven intelligence,

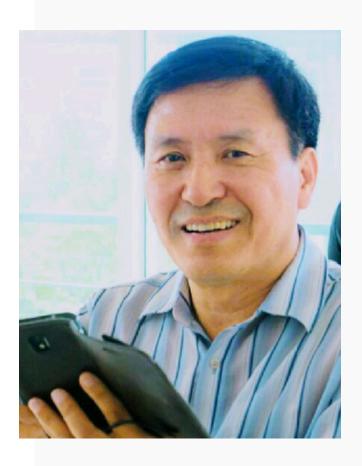


Ketan Chandra, meeting In Goa, IIT ISM dhanbad..



Attending Al summit in Ireland, South Korea.

#### James Huh



66

Intellectual property today is a catalyst for growth. At Incubig, we provide insights that help our clients seize opportunities and stay ahead in a dynamic global landscape.

James Huh, an expert in intellectual property management and sales, brings a wealth of experience to Incubig. As IPMS Chairman and KPAA Secretary General, he has a deep understanding of global IP trends.

His involvement with the Korea Production Center and KISTI, along with his role as a visiting professor at IBU and adjunct professor at Korea University, strengthens Incubig's efforts in providing world-class IP intelligence.

His expertise in international contracts and IP management is invaluable in shaping lncubig's strategic approach to delivering cutting-edge patent research solutions.



Dinner & business In Seoul, and Busan.

## **Arvind Singh**





AI is redefining how we harness data for innovation. At Incubig, we're building solutions that transform raw data into meaningful insights, empowering our clients to drive smarter decisions and impactful growth.

Arvind Singh, Chief Al Advisor at Incubig, brings 12+ years of experience in driving growth and innovation. A former VP of Engineering at PayU and GirnarSoft, he specializes in Al-driven product development.

His strategic insights are key to advancing Incubig's tech solutions.



Walk, talk and collaborate

## **Michael Wright**



66

Strategic insight is about looking beyond the horizon. At Incubig, we're harnessing technology and foresight to turn complex trends into clear opportunities, helping our clients lead in innovation.

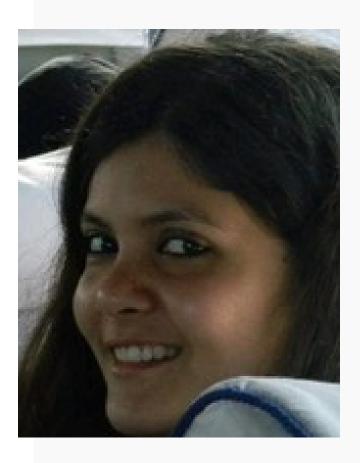
Michael Wright, Business Strategist at Incubig, brings over 30 years of experience in high-tech innovation and strategic foresight.

As CEO of Intercepting Horizons, he helps companies navigate emerging technologies and trends. With expertise in Al, automation, and smart tech, Michael guides Incubig's growth and technology strategy.



Biomimetics24 & Technological events

### Mridula Sharma



66

Successful innovation starts with the right insights. At Incubig, we dig deep into market data and patent landscapes, identifying opportunities that empower our clients to make strategic, forward-thinking decisions.

At Incubig, Mridula Sharma focusing on identifying licensing opportunities for clients through in-depth market and product analysis. She develops Innovation Profiles for startups, ensuring they are positioned for success in their respective fields.

Additionally, she conducts thorough technology reviews and market assessments of various patent portfolios, providing valuable insights that drive strategic decisions for our clients.



The interns from South Korea who worked with Incubig played a key role in market testing. Their efforts focused on assessing product-market fit, gathering user feedback, and helping shape the go-to-market strategies for Incubig's Al-driven research products.

Their contributions were crucial in refining the platform to better meet the needs of diverse industries and markets.







Incubig's journey has been fueled by a diverse team from around the world, bringing expertise from both business and technology sectors. Their unique perspectives and varied backgrounds have been essential in shaping innovative solutions that push the boundaries of research and innovation.

This mix of global perspectives has played a huge part in making Incubig what it is today, creating solutions that truly meet the needs of our diverse clients.





































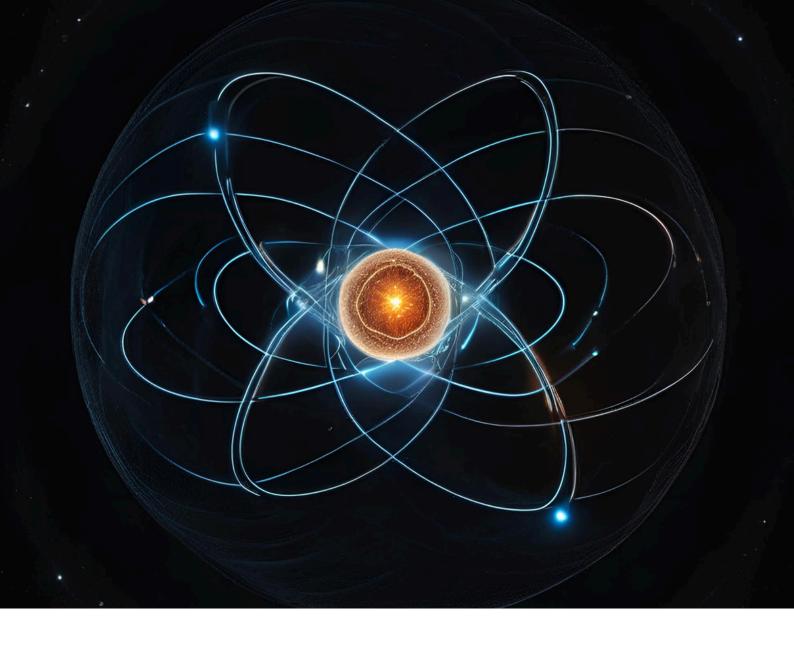








# United States White House appreciated our research work on coronavirus.



Because Heart Matters - Arpit Lekhra

This work is lovingly dedicated to the memory of my brother, Arpit Lekhra



Follow

#### Arpit Lekhra 🏻 😉

#### **Affiliation**

Department of Augmented Vision Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau (RPTU) Kaiserslautern, Germany

#### **Publication Topics**

2D Pose, Action Localization, Angle Error, Asteraceae, Athletes, Ballistic Trajectory,
Boundary Markers, Bounding Box, Center Of Mass, Continuous Video, Convolutional Network,
Convolutional Neural Network, Feature Maps, Graph Convolutional Network, Hip Joint,
Human Pose, Joint Angles, Localization Accuracy, Low Latency, Metric Scale, Neural Network,
Parametrized, Peak Height, Pose Estimation, Receptive Field, Recurrent Neural Network,
Temporal Coding, Temporal Convolution, Temporal Convolutional Network, Vision Transformer





## A note by Ankit Lekhra

"Those who unlock the power of knowledge are the ones who will shape the future"

Ankit Lekhra
 Founder & CEO, Incubig
 Life Fellow, IIT AC

As we move forward into the age of AI, it's clear that research will not just be a tool for specialists—it will be woven into the fabric of everyday decision-making.

At Incubig, our journey is built on a shared belief: that empowering people with the right insights can spark new ideas and unlock unseen opportunities.

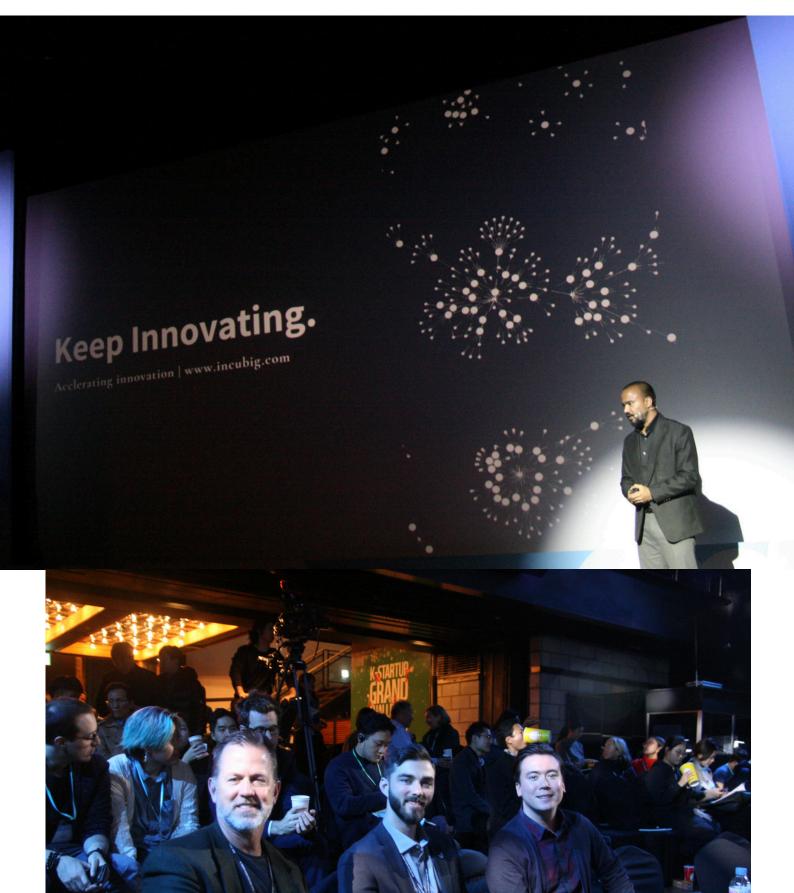
Our partners and collaborators play a vital role in this vision, driving change across industries.

In this rapidly evolving world, research is no longer optional—it's essential for everyone.



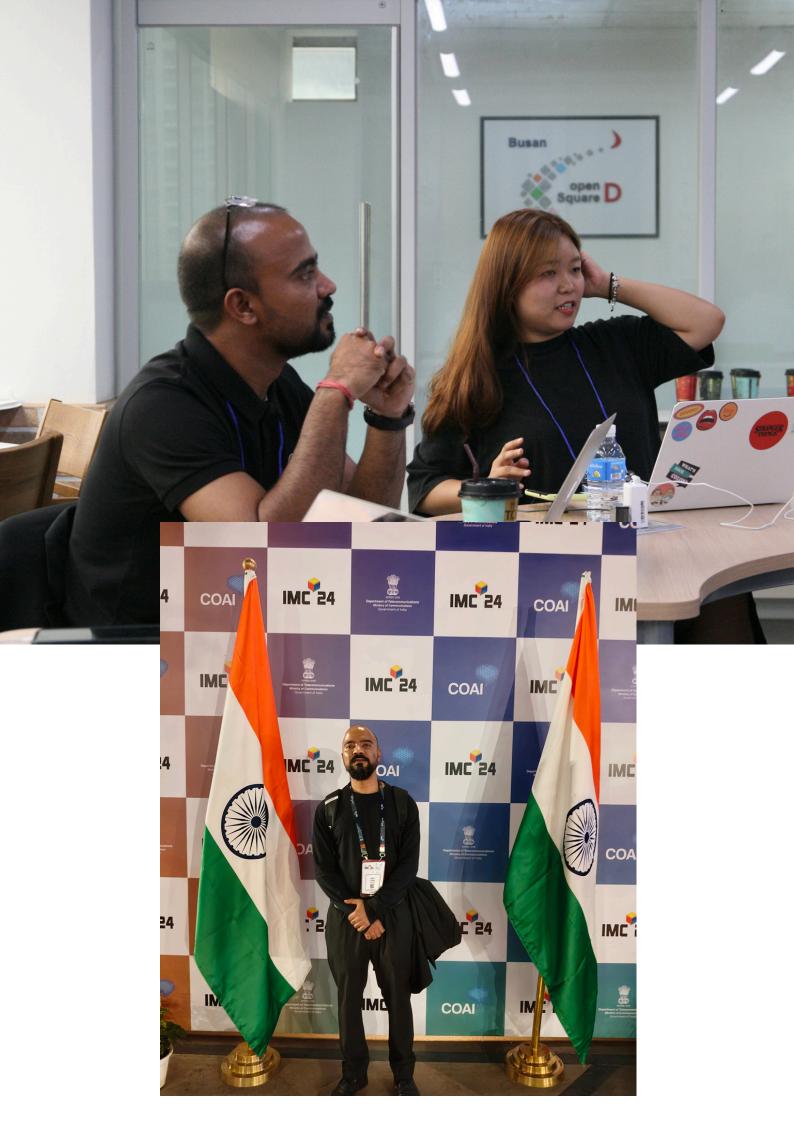


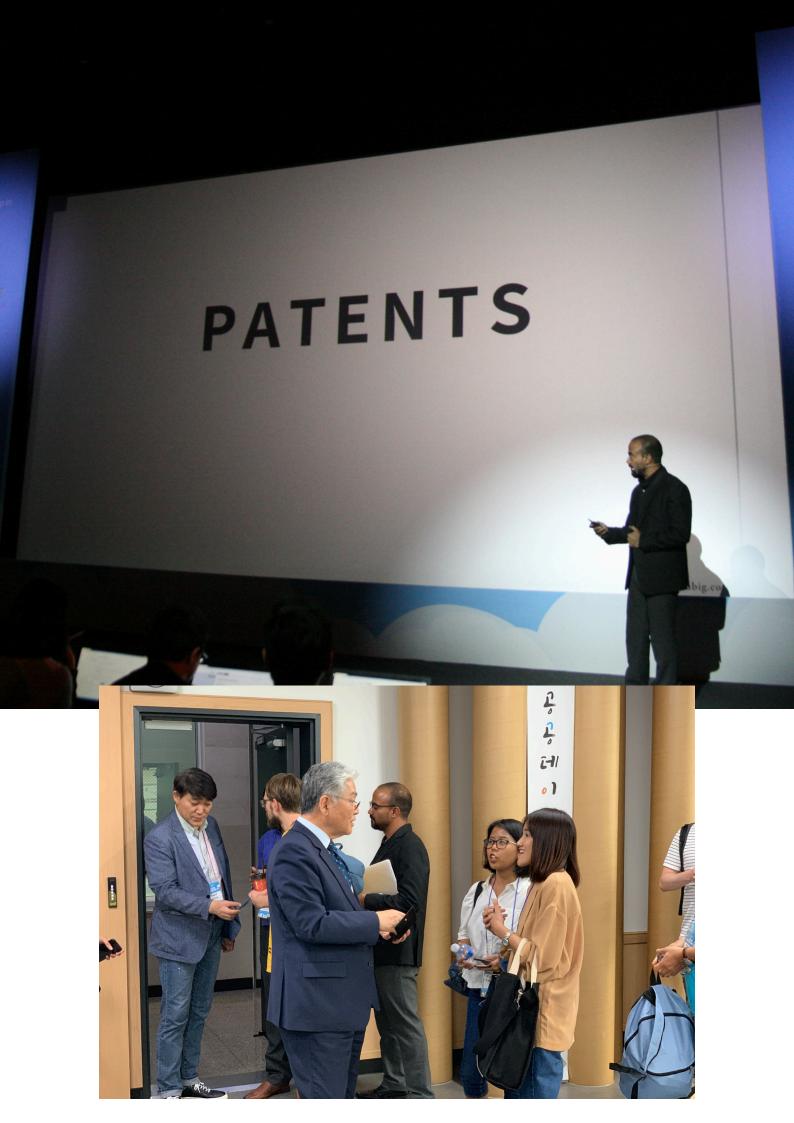


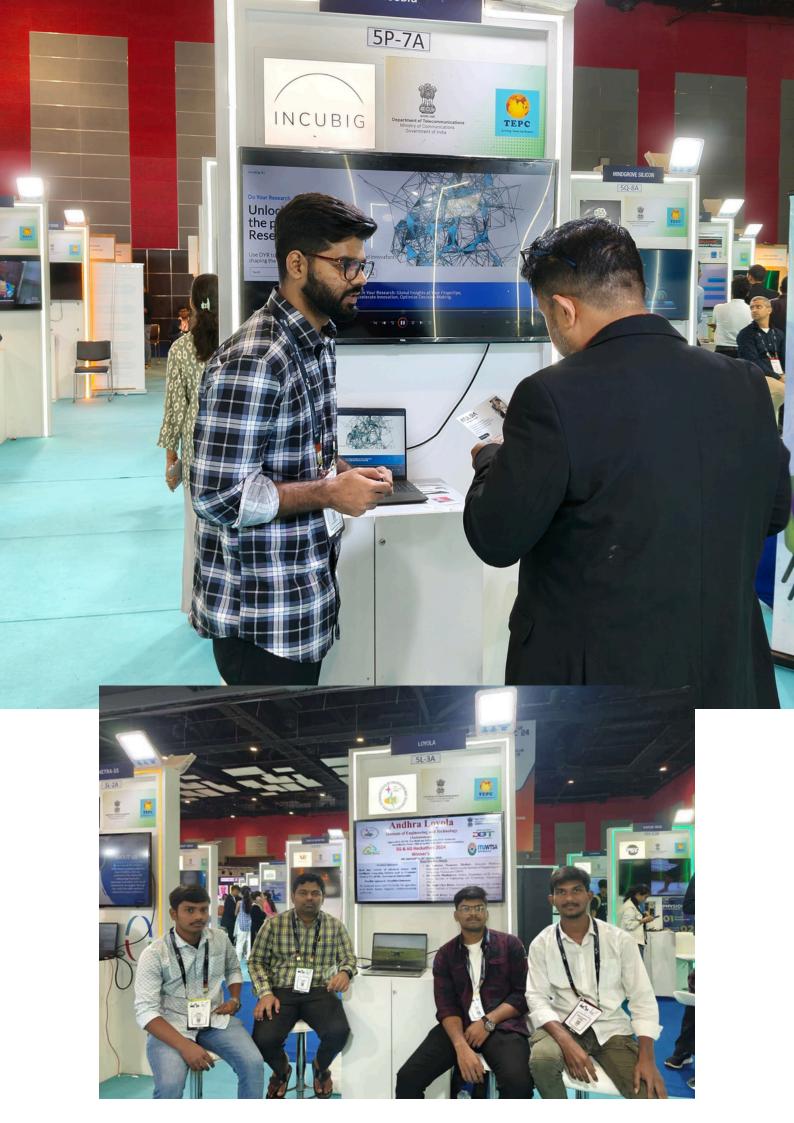


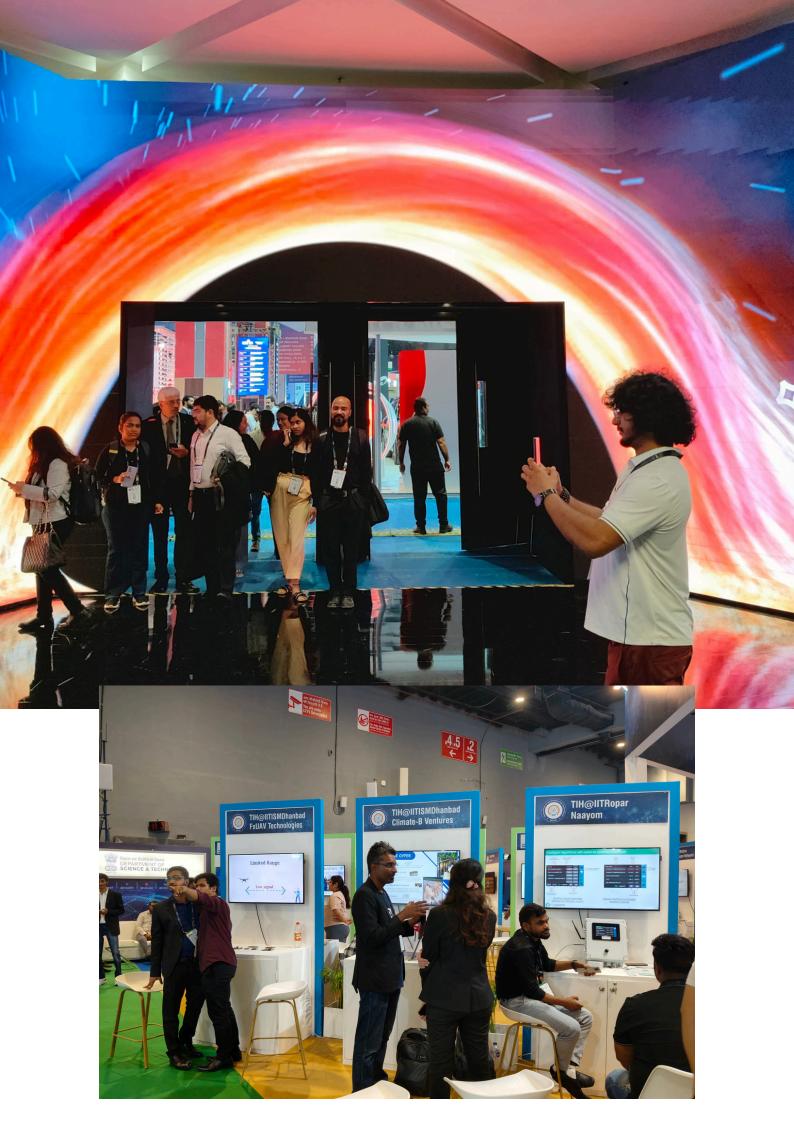










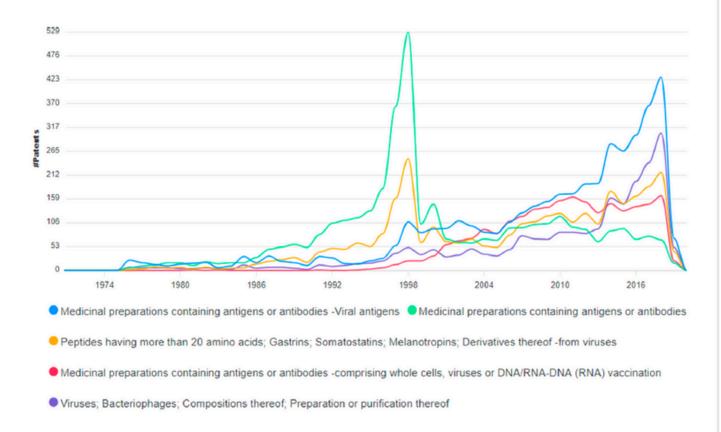


Our work has played a pivotal role in driving key decisions that shape the future.

## BRIEF OVERVIEW ON CORONAVIRUS

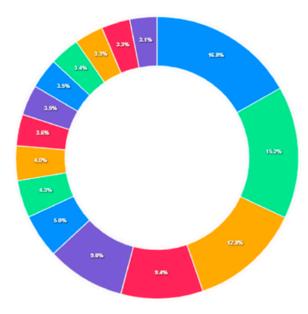
Urgent brief from the C19 Task Force of IIT Alumni Council.

#### KEY RESEARCH AREAS

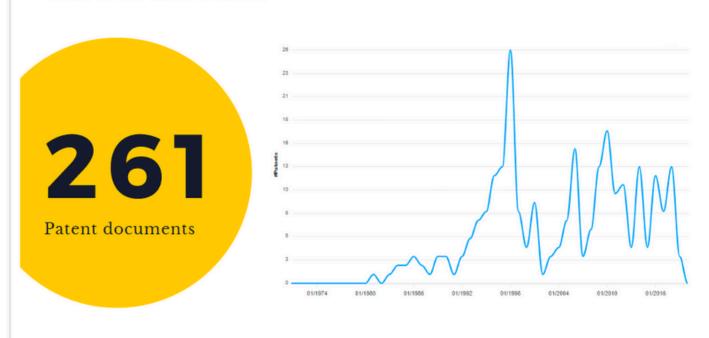


#### **Research Activity**

- The graph above provides a comparison in YOY research activity under each key areas related to coronavirus.
- A steady rise in patent filing can be observed under most of the key research areas in the last decade.
- 16.9% of the filed patents fall under the research area- Medicinal preparations containing antigens or antibodies -viral antigens.
- 15.2% of the filed patents fall under the key research area - Medicinal preparations containing antigens or antibodies.



#### THE USA AS DEPARTMENT OF HEALTH AND HUMAN SERVICES



#### Top Research Areas

- Medicinal preparations containing antigens or antibodies.
- Peptides having more than 20 amino acids, Gastrins, Somatostatins, Melanotropins, Derivatives from viruses.
- Medicinal preparations containing antigens or antibodies: Viral antigens.

#### **Recent Patents**

Compositions and methods for prevention or treatment of neoplastic disease in a mammalian subject.

Live attenuated virus vaccines for la crosse virus and other bunyaviridae.

Recombinant virus with diminished latency and methods of using same.

# The Hong kong University did extensive research under coronaviruses, new isolates, mutants or their genomic sequences.

Used the SARS experience as a model for future pandemics.

### What are key research and applications areas

**Applications** 

Strand displacement amplification [SDA]

## NUCLEIC ACID AMPLIFICATION DIAGNOSTICS

Nucleic acid amplification reactions.

Strand displacement amplification [SDA]

Key Research Areas Nucleic acid amplification reactions.

Recombinase

Strand displacement amplification [SDA]

## HYDROGEN AS A FUTURE ENERGY SOURCE

Incubig's brief research intelligence study on hydrogen production for meeting future energy demands.

## Hydrogen - A fuel of the future.

Hydrogen was originally used by the Nazis to produce synthetic fuels from coal. Today, it is back in business. There has been great interest in hydrogen as an energy carrier in the transport sector. Recent studies have suggested that, a complete switch to hydrogen fuel-cell vehicles in the transportation sector would likely lead to a significant improvement in health, air quality and climate.

1

#### Hydrogen Fuel Cell market

Valued at USD 10.49 billion in 2019 and is expected to attain a USD 49.52 billion value by the year 2027, at a CAGR of 21.4%

2

#### Greenhouse gas emissions

Bloomberg New Energy Finance said clean hydrogen "can help address the toughest third of global greenhouse gas emissions by 2050.

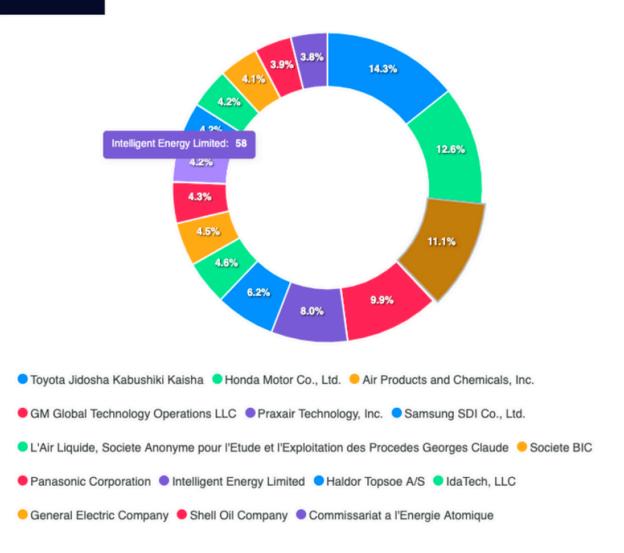
3

#### Challenges

Need to build up **hydrogen infrastructure**. That is a huge task that needs **political support**.

#### **KEY**

#### **ORGANIZATIONS**

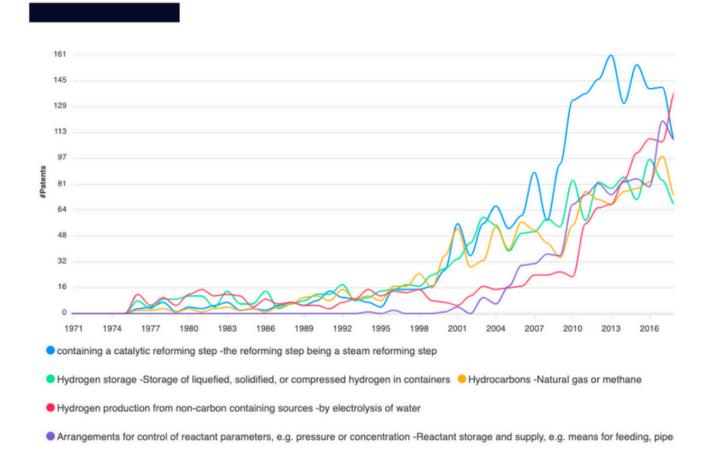




Some of the other key research & market players in this domain are Samsung, Panasonic, Haldor Topsøe, General Electric, and Shell.

**Intelligent Energy Limited** with 58 granted patents owns around **4.2%** of the total patent share.

#### RESEARCH AREAS





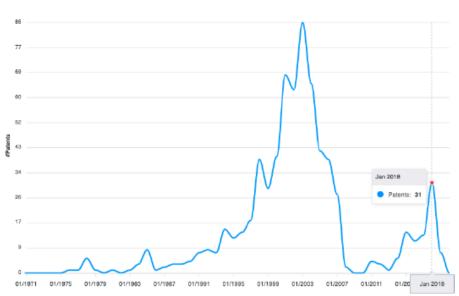
The highest research activity has been conducted under catalytic reforming step.

The other key research areas are hydrogen storage, Hydrocarbons-Natural gas, and hydrogen production from non-carbon containing sources.

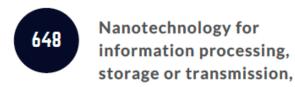
## PATENT LANDSCAPE ON QUANTUM TECHNOLOGY

## IBM RESEARCH ACTIVITY





#### Patents under Research Areas







#### **Recent Granted Patents**

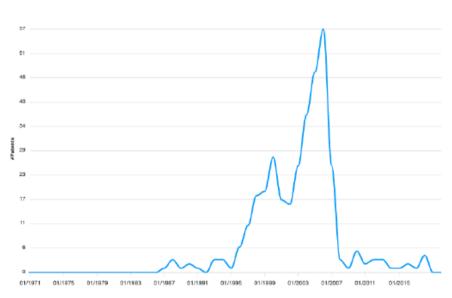
High fidelity threshold detection of single microwave photons using a quantum non-demolition photon detector

Architecture for coupling quantum bits using localized resonators

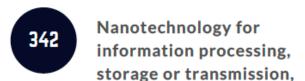
Weakly tunable qubit based on two coupled disparate transmons

#### TOSHIBA RESEARCH ACTIVITY

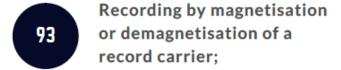




#### Patents under Research Areas







#### **Recent Granted Patents**

Computing device comprising a josephson junction

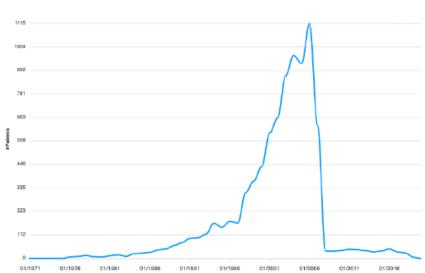
Quantum computer and quantum computing method

Quantum optical system

#### **NANOTECHNOLOGY**

#### **ANALYSIS**





#### **Key Players Operating**







#### **Recent Granted Patents**

Architecture for coupling quantum bits using localized resonators

Measurement-only topological quantum computation

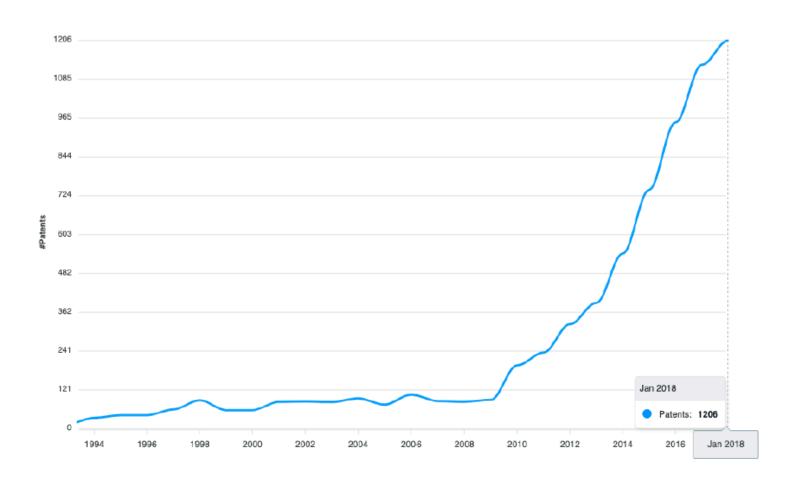
Shielded through via structures and methods for fabricating shielded through via structures

## ROBOTICS

Incubig's brief landscape study in association with Intercepting Horizons.

#### **PATENT**

#### FILING TRENDS

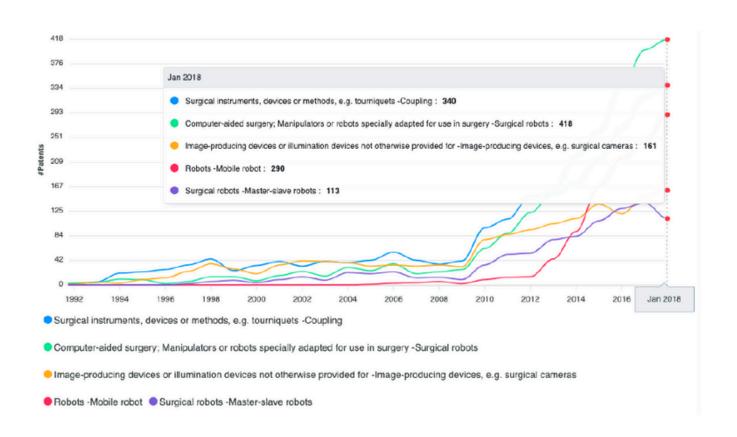




Constantly rising trend under Robotics research since 2010. High research value and multiple monetization application areas.

#### **KEY**

#### RESEARCH AREAS





The highest research activity has been conducted under Surgical instruments.

The other key research areas are computer-aided surgery, Surgical cameras, and Mobile robot.

## ENERGY DEMAND FOR ELECTROMOBILITY

Incubig's brief research intelligence study & prior art analysis of the patent US9698398B2 in association with Market Insight Consultants (MIC)

## Future demand for EV batteries.

The world is shifting to electric vehicles (EV) to mitigate climate change. The EV advantage, together with technological progress and governmental subsidies led to a massive increase in the demand for EVs.

1

#### **Demand for EVs**

Few thousands just a decade ago to 7.5 million vehicles in 2019.

2

#### Market penetration of EVs

**Just 1.5% in 2019** and future growth is expected to dwarf past growth in absolute numbers.

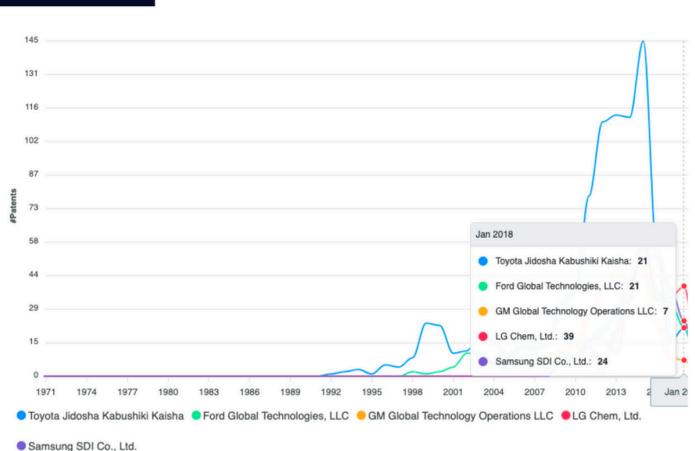
3

#### **Energy demand**

2040 battery demand from EVs produced in Europe will reach 1,200 gigawatt-hours per year.

#### TOP 5

#### **ORGANIZATIONS**



The graph shows the YoY patent activity of the top 5 organizations.



Toyota is one of the top players with 145 patents granted in Jan 2015, followed by Ford, GM, LG, and Samsung.

#### **SAMSUNG**

#### <u>KR20080010156A</u>

Title: Battery module

#### RELEVANT EXCERPTS

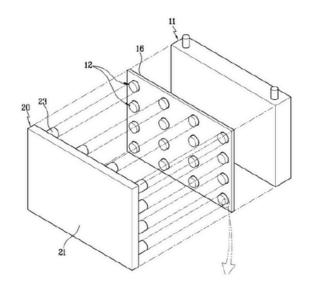
In order to achieve the above object, a battery module according to an embodiment of the present invention includes unit cells and a spacing member disposed between the unit cells, and the spacing member includes protrusions directly attached to the unit cells. The protrusions may be made of a synthetic resin or ceramic, and the protrusions may be formed of an anodic oxidation coating on the surface of the unit cells,

The protrusions 12 are disposed between the unit cells 11 in a fixed state attached to the unit cells 11 so as to maintain the interval between the unit cells 11.

As shown in FIG. 5B, the protrusions 42 may have a rectangular column shape. As shown in FIG. 5C, the protrusions 43 may have a pentagonal prism shape, and the protrusions 44 may have a hexagonal column shape, as shown in FIG. 5D. Although not shown in the drawings, the protrusions may be formed in a rib shape elongated in the advancing direction of the cooling medium. That is, the protrusions of the spacer according to the present invention are not limited to any one form.

#### **PATENT DATES**

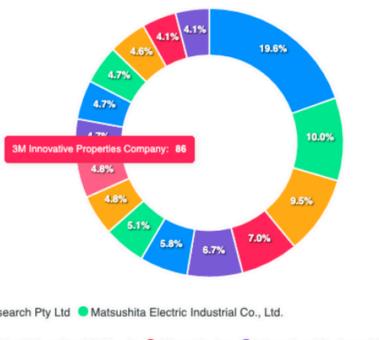
- Filing date: 2006-07-26
- Application Publication date: 2008-01-30



## MATERIAL SCIENCE

Incubig's brief landscape study in association with Intercepting Horizons.

#### ORGANIZATIONS



Silverbrook Research Pty Ltd
Matsushita Electric Industrial Co., Ltd.
The Regents of the University of California
Affymetrix, Inc.
International Business Machines Corporation
E. I. Du Pont de Nemours and Company
Samsung Electronics Co., Ltd.
William Marsh Rice University
3M Innovative Properties Company
Canon Kabushiki Kaisha
Massachusetts Institute of Technology
Cabot Corporation
The United States of America as represented by the Secretary of the Navy
President and Fellows of Harvard College
Hon Hai Precision Industry Co., Ltd.

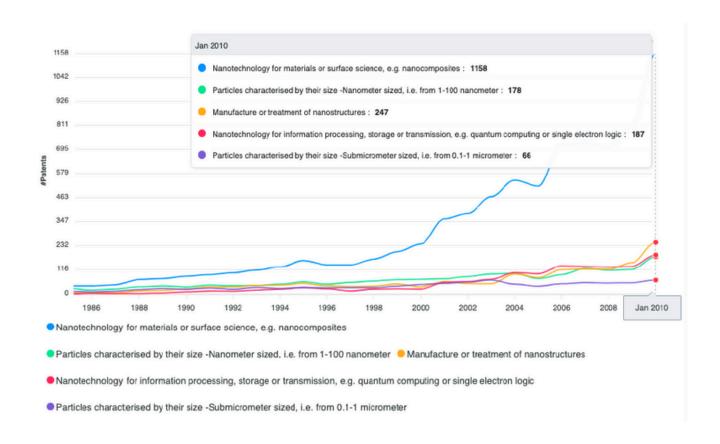
Some of the other key research & market players in this domain are Du Pont, Samsung, 3M Innovative, MIT, Cannon, and Cabot Corporation.



3M with 86 granted patents owns around 4.8% of the total patent share.

#### KEY

#### RESEARCH AREAS



One of the key research areas is Nanotechnology for materials.



Other key research areas are Nanometer-sized particles, manufacture or treatment of nanostructures, and nanotechnology for information processing.

### Future is autonomous.

-Self learning AI.

## AI will be the driving force of industry.

- · Multi-functional Robots
- · Virtual nursing, drug discovery
- · Autonomous cars
- · 3D-Printing manufacturing
- · Autonomous weapons
- Super-humans

Incubig • Jun 02, 2020

TRANSPORTATION	FARMING	HEALTHCARE
SURVEILLANCE	MANUFACTURING	MINING
FINANCE	GENETICS	WEAPONS
FINANCE	GENETICS	UNIVERSE, OCEANS



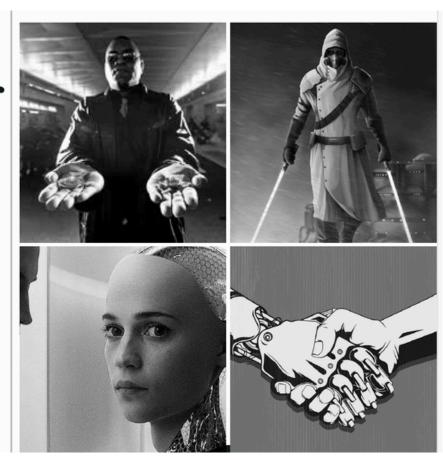
Of the 9,100 patents received by IBM inventors in 2018, 1,600 (or nearly 18 percent) were AI-related.

## Possibilities of Future?

Will depend a lot on Ethics.

- Security
- Mass unemployment
- Behavior and interaction

Incubig • Jun 02, 2020





Incubig • Jun 02, 2020

## The CRISPR Baby Scandal

He Jiankui, a Chinese scientist claims to have helped make the world's first genome-edited babies — twin girls.

## Unlock Innovation Potential—One Platform for All Your IPR Needs.

## At Incubig, we simplify and strengthen the journey from invention to market leadership through a single-window IPR solution.

At Incubig, we simplify and strengthen the journey from invention to market leadership through a single-window IPR solution. By uniting advanced technology with a global network of IP experts from the US, Korea, and India, we make it easy for universities, corporations, and VC funds to protect, manage, and capitalize on their intellectual assets.

- Unified Platform: Unified IPR platform for hassle-free patent filing, protection, and commercialization.
- Global Partner Network: Global partnerships with domain experts to offer clients comprehensive solutions.
- Tailored Solutions: Tailored solutions to meet specific needs of academic, corporate, and investor clients.

## Why a Single-Window Solution Matters?

Managing intellectual property can be overwhelming, particularly for organizations dealing with multiple innovations across different domains. The challenges often involve coordinating between various stakeholders, understanding the intricate nuances of patent law, and ensuring timely filings to secure rights.

Incubig's integrated platform consolidates all these processes, providing:

#### **Efficiency**

All your IP needs are handled in one place, reducing administrative burdens and streamlining workflows.

#### **Expert Guidance**

Our deep expertise ensures that you not only protect your innovations but also maximize their value through strategic licensing and commercialization.

#### **Comprehensive Protection**

From protecting your core innovations to exploring new market opportunities, our platform ensures that your intellectual property is an asset that drives growth and competitive advantage.

Incubig, along with its global partners from the US, South Korea, and India, is committed to simplifying and securing your intellectual property needs through an allencompassing, single-window solution.



Our global expertise, spanning top law firms, specialized attorneys, business experts, and IPR consultants, offers unparalleled support for every stage of your IP journey.





































#### Global Partner Network for End-to-End IP Management

Through partnerships with top law firms, expert attorneys, and industry advisors, Incubig provides clients with a global support network.

- IP Attorneys and Law Firms: Offering legal expertise across industries to protect patents worldwide.
- Business Experts and IPR Consultants: Specialised knowledge to address sector-specific IP needs.
- Global Reach with Local Expertise: A team spanning continents ensures compliance with local laws and global standards.

#### End-to-End IPR Solutions Offered by Incubig's Single-Window Service

#### **IPR Filings**

Covering patents, trademarks, copyrights, and more, we manage the entire filing process with precision and efficiency.

#### **Licensing & Commercialization**

Beyond protection, we facilitate the effective commercialization of your patents, ensuring a strategic path to market success.

#### Valuation & Safeguarding

Through advanced analytics and valuation methods, we assess and protect your intellectual assets against, technology theft, infringement and financial risk.

#### **Strategic Consultation & Management:**

Expert consultation tailored to each client segment to maximize IP value and align it with organizational goals.

Empowering Universities in Advancing research, Elevating Rankings, & Unlocking Revenue Potential.



#### We are Empowering Universities in Advancing research, Elevating Rankings, & Unlocking Revenue Potential.

For universities intellectual property plays a pivotal role in advancing research and innovation, while also impacting key metrics like global rankings and student admissions.

The importance of effectively managing patents, trademarks, and copyrights goes beyond mere legal protection—it directly influences the institution's reputation, research funding, and ability to attract talent.

## Powering Universities with one stop solution for all IPR needs.

#### **Advancing Research Impact:**

Research is central to academic excellence. Incubig helps universities quickly secure intellectual property rights for groundbreaking faculty and student work, enhancing credibility and attracting funding for future innovation.

#### **Elevating University Rankings:**

Strong IP portfolios directly impact university rankings, drawing global attention and influencing student admissions. Incubig's platform simplifies IP management, positioning universities competitively in the academic landscape.

#### **Unlocking Revenue Potential:**

Patents and industry licensing create valuable revenue streams that fuel further research. Incubig guides universities from patenting through licensing, fostering collaboration and translating academic research into real-world applications.

Incubig helps universities tap into a global research ecosystem, enabling them to benchmark their innovations, identify emerging trends, and discover new growth opportunities.

This comprehensive insight supports research excellence, enhances university rankings, and drives student engagement.

## Massachusetts institute of technology Update

Medical Science | Electrical Instruments | Biochemistry | Mensuration | Metallurgy

Cambridge, US

Overview Dataset Trends Technologies

Company Page | Overview

#### **About Company**

Massachusetts institute of technology is a company from US, primarily working on 'Sockets, e.g. of suction type'. It is part of Medical Science, where company has filed 755 patents. Total patents filed by company are 4095.



## Massachusetts institute of technology Update

Medical Science | Electrical Instruments | Biochemistry | Mensuration | Metallurgy

• Cambridge, US

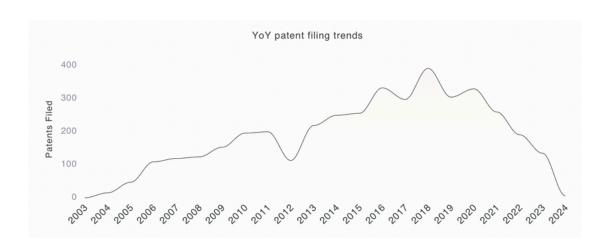
Overview Dataset Trends Technologies

Company Page | Trends

#### **Key Trends**

#### Recently in the year 2018, 394 patents were filed.

- 52.1% of the patent applications filed are granted.
- 2018 observed a high research activity.
- 394 patents were filed in 2018 year.

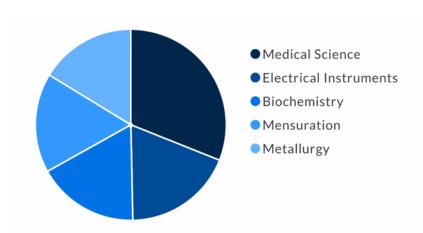


## Massachusetts institute of technology Update

Medical Science | Electrical Instruments | Biochemistry | Mensuration | Metallurgy

O Cambridge, US





#### Top technologies (click to view)

Technologies	Patent Count
Sockets, e.g. of suction type	755 new patents
Characterised by the means for switching between superconductive and normal states	453 new patents
Preparation or screening of expression libraries, e.g. reporter assays	419 new patents
Using optical pumping	409 new patents
Polyester-amides	396 new patents

# Massachusetts institute of technology Update Medical Science | Electrical Instruments | Biochemistry | Mensuration | Metallurgy Cambridge, US Overview Dataset Trends Technologies Company Page | Data

#### Patent data

In 2024, Massachusetts institute of technology filed a patent on Sequence-controlled polymer random access memory storage.

Click to read patents

All inventors ~

#### Sequence-controlled polymer random access memory storage

Tyson shepherd | Computational technology | 2024 | US

Methods for controlled segregation of blocks of information encoded in the sequence of a biopolymer, such as nucleic acids and

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AII	inventors
ΑII	IIIventors

#### Sequence-controlled polymer random access memory storage

Tyson shepherd | Computational technology | 2024 | US

Methods for controlled segregation of blocks of information encoded in the sequence of a biopolymer, such as nucleic acids and polypeptides, with rapid retrieval based on multiply ...

### Generation and synchronization of pulse-width modulated (pwm) waveforms for radi...

Alexander sergeev jurkov | Electric circuitry | 2024 | US

Described are concepts, systems, circuits and techniques directed toward methods and apparatus for generating one or more pulse width modulated (PWM) waveforms with the ability to ...

#### Recovery and recycling of byproducts of activated aluminum

Jude kelley | Chemical industry | 2024 | US

Methods, systems, and compositions related to the recycling and/or recovery of activating materials from activated aluminum are disclosed. In one embodiment, an aqueous solutions c...

## For Large Corporations: Securing Innovation Optimizing R&D investments and Market Advantage



#### For Large Corporations: Securing Innovation, Optimizing R&D Investments and Market Advantage

In today's highly competitive landscape, large corporations must prioritize protecting their innovations to maintain a strong market position and maximize the value of their R&D investments.

Through strategic IP filings and robust protections, corporations can safeguard proprietary knowledge and ensure long-term growth. Here's how our single-window IPR solutions support these goals:

## Here's how our single-window IPR solutions support these goals:

#### **Defend Market Position**

Patent filings and IP protections provide corporations with exclusive rights to their technologies, defending their market share and leadership by limiting competitor access to core innovations.

#### **Optimize R&D Investments**

Our platform identifies and safeguards valuable innovations, ensuring that R&D spending is directed toward developments that are both protected and aligned with business strategy, driving meaningful returns on investment.

#### **Protect Proprietary Knowledge**

Comprehensive IP security measures shield corporations from imitation or reverse engineering, helping them to maintain their brand's integrity and competitive edge in the market.

Incubig provides corporations with the insights needed to strengthen IP protection, optimize R&D investments, and secure competitive advantages.

Our platform helps safeguard proprietary technologies and maximize the impact of innovation efforts in a dynamic market

#### Nvidia corporation Update



Computational Technology | Communication Technique | Educational Material | Mensuration | Physics: Control Aparatus

Santa clara, US



#### About Company

Nvidia corporation is a company from US, primarily working on 'Ray-tracing'. It is part of Computational Technology, where company has filed 2489 patents. Total patents filed by company are 3836.



#### Nvidia corporation

Update

Computational Technology | Communication Technique | Educational Material | Mensuration | Physics: Control Aparatus

Santa clara, US

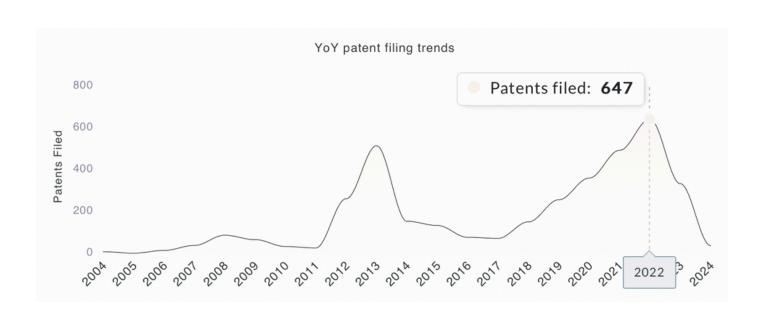
Overview Dataset Trends Technologies

Company Page | Trends

#### **Key Trends**

#### Recently in the year 2022, 647 patents were filed.

- 42.0% of the patent applications filed are granted.
- · 2022 observed a high research activity.
- 647 patents were filed in 2022 year.



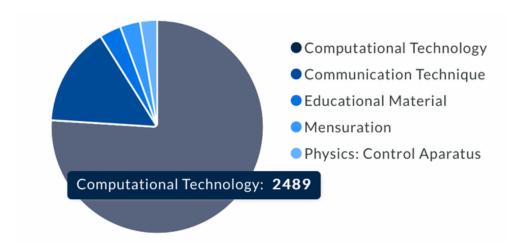
#### Nvidia corporation

Update

Computational Technology | Communication Technique | Educational Material | Mensuration | Physics: Control Aparatus

Santa clara, US





Technologies	Patent Count
Ray-tracing	2489 new patents
Link aggregation, e.g. trunking	493 new patents
Details of a display terminal, the details relating to the control arrangement of the display terminal and to the interfaces thereto	108 new patents
Point data, e.g. point of interest	100 new patents
Characterized by the autonomous decision making process, e.g. artificial intelligence, predefined behaviours	85 new patents

#### Nvidia corporation Update

Computational Technology | Communication Technique | Educational Material | Mensuration | Physics: Control Aparatus

Santa clara, US

Dataset Overview Trends Technologies Company Page | Data

#### Patent data

In 2024, Nyidia corporation filed a patent on Inline data inspection for workload simplification.

Click to read patents

All inventors

#### Inline data inspection for workload simplification

Andrew kerr | Computational technology | 2024 | US

A method, computer readable medium, and processor are described herein for inline data inspection by using a decoder to decode a load instruction, including a signal to cause a cir...

Research intelligence by Incubig AI | incubig.org © 2024

All inventors

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#### Inline data inspection for workload simplification

Andrew kerr | Computational technology | 2024 | US

A method, computer readable medium, and processor are described herein for inline data inspection by using a decoder to decode a load instruction, including a signal to cause a cir...

#### Behavior planning for autonomous vehicles

Yizhou wang | Vehicles | 2024 | US

Embodiments of the present disclosure relate to behavior planning for autonomous vehicles. The technology described herein selects a preferred trajectory for an autonomous vehicle ...

#### Application programming interface to accelerate matrix operations

Piotr majcher | Computational technology | 2024 | US

Apparatuses, systems, and techniques to determine a matrix multiplication algorithm for a matrix multiplication operation. In at least one embodiment, a matrix multiplication opera...

# For VC Funds: Maximizing Investment Security and Growth Potential



## For VC Funds: Maximizing Investment Security and Growth Potential

For venture capital funds, securing intellectual property is a critical factor in reducing investment risks and enhancing the long-term viability of portfolio companies.

By ensuring that IP assets are well-protected, VCs can drive growth, safeguard technology, and maximize value across their investments.

Here's how our single-window IPR solutions help VC funds achieve these goals:

## Our single-window IPR solutions empower VC funds to protect and maximize their investments

#### **Enhance Portfolio Value**

Protecting key innovations through patents and IP rights strengthens the valuation of portfolio companies, increasing potential returns on investment by ensuring that unique technologies are exclusive and defensible.

#### Reduce Technology Leakage

Comprehensive IP protection prevents unauthorized access or replication of core technologies, securing proprietary knowledge and reducing the risk of technology leakage, which is essential for maintaining a competitive edge.

#### **Drive Market Differentiation**

Strong IP portfolios allow portfolio companies to stand out in competitive markets, creating distinct value propositions and helping VC funds attract further investment interest or successful exits.

Incubig equips VCs with deep insights into emerging technologies and market landscapes, helping them identify high-potential investments and stay ahead of innovation trends.

Our platform offers a clear view of tech developments, enabling smarter decisions and safeguarding investments. Characterized by the autonomous decision making process, e.g. artificial intelligence, predefined

behaviours Update

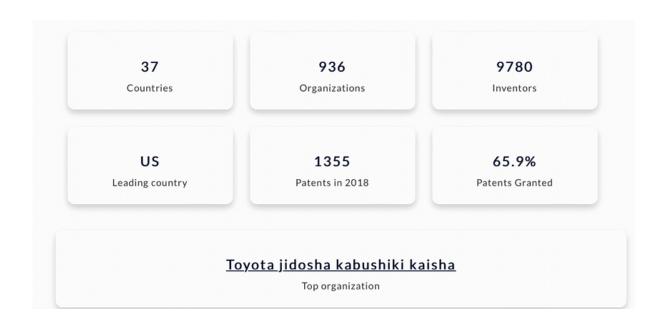
5285 patents filed | 37 countries working | 936 active organizations



#### **Key Points**

In **2018**, research surged globally in this technology with **37** countries actively innovating, led by **US**.

- · 2018 year observed a high research activity.
- 37 countries are actively doing research.
- . US is leading the research, followed by JP.
- Toyota jidosha kabushiki kaisha filed 280 patents recently.



## Characterized by the autonomous decision making process, e.g. artificial intelligence, predefined

behaviours Update

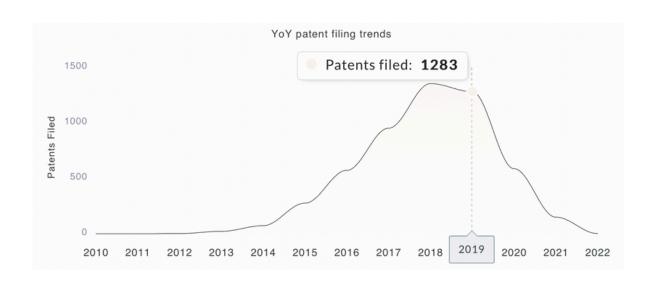
5285 patents filed | 37 countries working | 936 active organizations



#### **Key Trends**

#### Recently in the year 2018, 1355 patents were filed.

- **65.9%** of the patent applications filed are granted.
- 2018 observed a high research activity.
- 1355 patents were filed in 2018 year.



Characterized by the autonomous decision making process, e.g. artificial intelligence, predefined

behaviours Update

5285 patents filed | 37 countries working | 936 active organizations

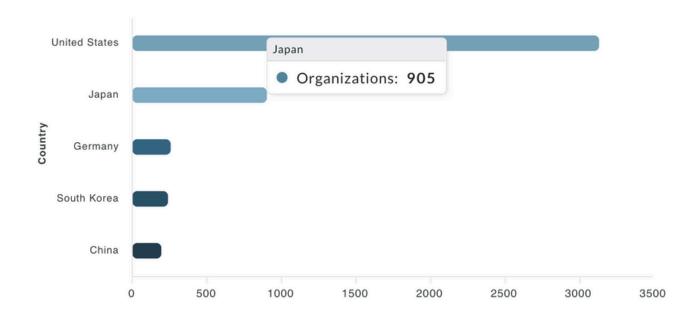
Overview Dataset Trends Global

Technology Monitoring | Global

#### View global activity

Leading global research hubs include **US**, **followed by JP and DE**. Noteworthy patent filers like **Toyota jidosha kabushiki kaisha** drive innovation worldwide.

- US is leading the research followed by JP and DF
- Toyota jidosha kabushiki kaisha is the top patent filer, with 280.

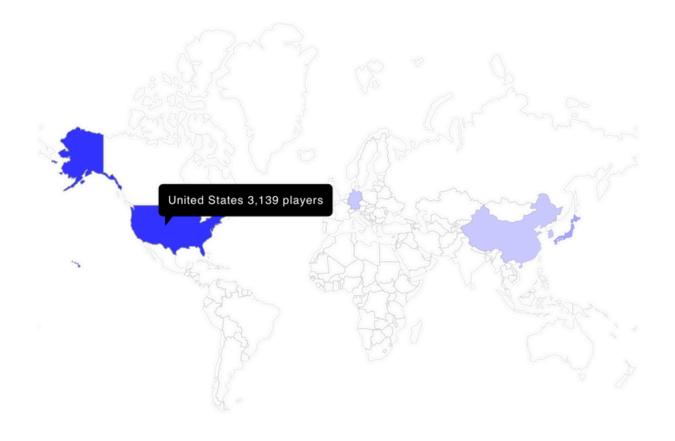


Global activity under the technology

37 936 9780 Countries Organizations Inventors

Country specific activity under technology





Organization	Recent Patents
Ford global technologies, Ilc	222
Gm global technology operations Ilc	217
Uber technologies, inc.	161
Waymo IIc	157
Baidu usa IIc	141

# The Incubig Advantage: Why Choose Us?



## The Incubig Advantage: Why Choose Us?

- Comprehensive, Single-Window Solution: Simplify IP management, from filing to monetization, with our all-in-one platform.
- Global Reach, Local Expertise: Legal and technical IP support in key markets worldwide, backed by region-specific insights.
- Commitment to Client Success: Our solutions are tailored to align with strategic goals, providing customized support for each client segment.



**INCUBIG AI's** 

#### RESEARCH Intelligence platform

Dont react to change, know future landscape



#### Personalized dashboard

- Research-driven personalised data intelligence.
- +100 million research data points driving insights.
- Complete, 360-degree research & market landscape.

#### **Innovation Index**

- Global research and business trends.
- Market understanding, & competitor intelligence.
- Partnership, and growth opportunities, gaps in technology/sectors, know the future landscape.
- Accelerated R&D, minimized infringement and litigation risk, increased valuation.

#### **IPR Solutions**

- Own valid and valuable patents, trademarks, & copyrights.
- Sector agnostic deep-dive reports for making right decisions at right time.
- Technology Valuation, Licensing and monetization solutions.

Incubig Al

# OWN YOUR INNOVATION

Own valid and Valuable Patents.

#### INCREASED VALIDITY

A quick novelty analysis report will help you to determine if your invention features are patentable or not.



#### INCREASED VALUATION

Claim feature/s recommendations for increasing valuation of your patent application.

#### DRAFTING ASSISTANCE

Patent drafting assistance & expert level review of your patent application. Preparing forms, and enabling you to easily file patents, thereby saving time & costs.



Incubig Al

# KNOW YOUR TECHNOLOGY

Make right research & business decisions.

#### KNOW FUTURE LANDSCAPE

Monitor technological maturity and advancements in your sector. Discover next big R&D area & innovation-driven patent filing opportunities.



#### MONITOR COMPETITION

With just a few clicks, discover, track, and analyze your competitors' research and product activities across both core and non-core sectors—giving you a continuous competitive edge.

#### BETTER ROI

Optimize investment, monetization, and M&A strategies with research-driven, predictive insights from Incubig.



Incubig Al

## DO YOUR RESEARCH

For making right research & business decisions.



#### FREEDOM TO OPERATE

Track technological advancements and maturity in your sector. Identify emerging R&D areas and innovation-led patent filing opportunities.



#### EARLY INFRINGEMENT

With Incubig, effortlessly track, analyze, and gain insights into your competitors' research and product activities across core and non-core sectors—keeping you a step ahead

#### INCREASE VALUATION

Boost your company's worth with data-driven insights. Incubig's intelligence helps you leverage IP to enhance valuation and drive strategic growth.

Kout emerging techn		
	Industry	h
	Computing	Charles H
	Aviation	Donald
	Electric Elements	Joachim
	Computing	Jeffrey
	Medical Science	

# IPR Solutions That Our Clients Trust and Value.





















## Insights look very nice.

-Suzanne Cook, CEO & Co Founder Ainstein Al

# Saved my time and money for filing my patents.

-MedTech Startup in Stealth Mode

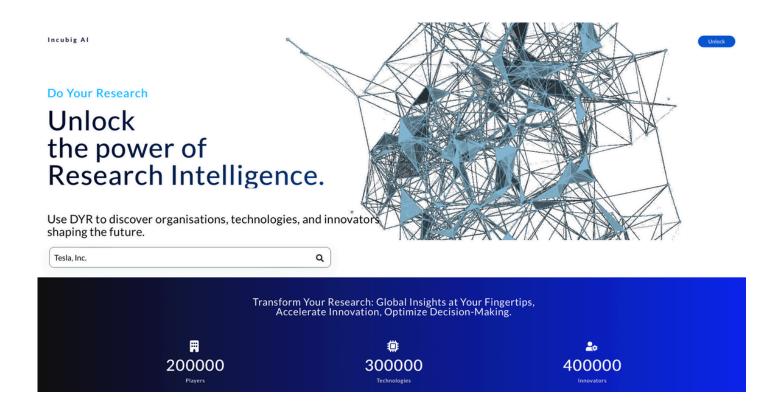
# Very satisfied with the results.

-LG Innotek

# Own Your Invention solution is significant.

-IITs, US Universities, VCs

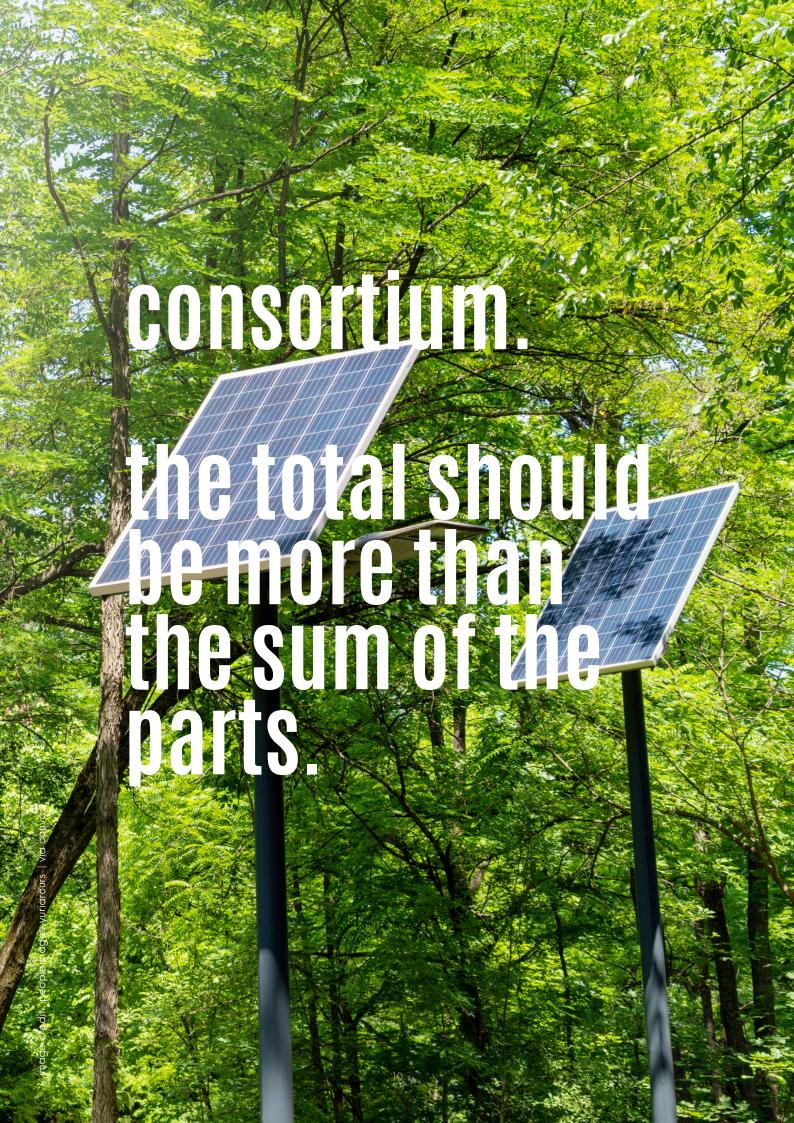




## DYR.INCUBIG.ORG

Just click and explore to see how Incubig can turn your vision into reality!

# KEEP INOVATING.



Being built like

# An Open Source Movement!!

Forum RPM has been designed not as an advisory business but as a movement. A truly inclusive movement which welcomes credible new partners to join its ranks. Partners can contribute time, resources or funding.

Our objective is to build the most powerful IPR monetisation platform in the world which can be used by users and organisations using a SaaS model.

This approach will avoid repetitive manual work in creating documentation multiple times, improve IPR through secondary research, help fine tune the original research problem, take timely steps for protection and defend IPR in case of violation.

The Forum RPM Platform welcomes as active members

Research & Innovation teams funded by conscientious technology companies.

Professional firms working in this domain.

Data owning/collecting companies who have access to relevant data and infrastructure for data collection.

User agencies and government departments who have a need for such services.

#### Contact us

to join the consortium

#### Non-profit platform in the IPR protection and monetisation space

The platform has been designed ground up for continued development and upgradation. This is not a for-profit initiative. As a user, you can be sure that your data will not be misused, exported or made available to unauthorised users.

#### Memorandum of Understanding across various areas

IIT Alumni Council has entered into several MoUs across geographies, sectors and industries. These include DRDO, IIT Ropar, Dassult Aviation, Mumbai University, Moscow University, UDCT and several others.

#### Global technologists, innovators & venture capitalists as backbone

All of whom are alumni of the prestigious Indian Institutes of Technology. This technology literate group is well placed to open doors and help access the latest developments globally.

### 1,000+ Interns who work on IIT Alumni Council projects as student volunteers

With one of the largest and most literate intern armies in the world - more than 50% of our interns are children of IIT Alumni. More than 90% of our volunteers and council members are IIT Alumni.

# COUNCIL foundational technologies:

A combination of global, open source, open API (application programming interface), and usercontributed & independently collected data can fundamentally alter the price performance and applicability of the RPM engine for the research targets being pursued by the scientist/ researcher.

# **TECHNOLOGY**

#### Contextual crawling of the web

A digital replica can be created at close to cellular level accuracy for living beings and at millimetre level accuracy for an entire city or estate. Once interfaced with live sensor feeds - the digital version starts behaving like a living being. However, this digital element is not constrained by the limitations of time and space. Thus it is possible to use the digital replica of a city or country to run climate change simulations at several orders of magnitude faster than real-time.

# **TECHNOLOGY**

#### Real world interfaces

Digital twin technology is fundamentally different from simulation of a static digital representation or replica. When appropriately handled with relevant and fastdeveloping Al tools - a digital replica converts to a dynamic digital twin. This approach can give life to a virtual digital element. The element could be a machine, a person or an entire town.

#### Correlation creation

Computer vision helps bring Al and digital twin to life. New photogrammetry tools including hyperspectral TECHNOLOGY imaging can see things which the human eye can not. To give an example from Agritech - a hyperspectral system can, not only identify the crop in the field, but it can accurately determine the exact species or variety of the plant. In addition, it can validate the health of the plant in terms of age, time to harvest, hydration level and nutrient deficiency. It can even assess the condition of the soil in terms of organic carbon content and other parameters.



#### megaSpheres

QUALITY OF LIFE INITIATIVE OF IIT ALUMNI COUNCIL



The megaSpheres initiative includes three mission organisations, and three mission facilitators synchronised to achieve its goal of accelerated socioeconomic progress through technological and financial interventions.

Idea stage ventures are incubated at the INCUBATOR.

FORUM facilitates access to strategic resources & growth capital.

INSTITUTE helps access research resources & indigenous technologies.







.STARTUP ACCELERATOR.



.APPLIED RESEARCH .



#### HEALTHSPAN ENHANCEMENT INITIATIVE

The C19 Task Force was set up by the IIT Alumni Council as a Rs 700 crore initiative to catalyse the national fight against Covid. The C19 Task Force morphed into the MegaLab mission in August 2021.

MegaLab advances preventive health and longevity through a fusion of traditional medicine systems with cutting-edge technologies and artificial intelligence.

megalab.in



#### GLOBAL ALUMNI OUTREACH & PARTICIPATION

MegaReach for an outreach to IIT alumni around the world who can help in the identification, development and deployment of key technologies involved in the MegaFund's target areas for investment.

megareach.in



#### SOCIAL FUND REGULATED AS AN AIF FUND BY SEBI

The MegaFund is a consortium of social and venture capital funds with a target corpus of Rs 21,000 crores and a fund life of twenty years. The anchor entity PanIIT Fund is registered with and regulated by SEBI under the Social Impact Fund framework under the AIF Regulations 2012. The MegaFund promotes the progress of science and technology, advances national health and prosperity and helps to secure and lead in key strategic technologies including climate change.

megafund.in



#### PROJECT IMPLEMENTATION AGENCY

A central project implementation and compliance platform which implements pilot projects for technology demonstration and validation. The Forum also does esg, environment and concurrent audits for impact assessment studies.

forums.org.in



#### TECHNOLOGY STARTUP ACCELERATOR

Startup accelerator, which works on a venture studio model to pivot or incubate projects in identified areas with the objective of catalysing the creation of professionally-managed, board-run companies which are build ground-up for early stage listing on a stock market.

incubator.org.in

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#### APPLIED RESEARCH ORGANISATION

A research platform which identifies appropriate resources from industry, research institutions and academia to meet the needs of ventures and projects supported by the various mission organisations and facilitators of the IIT Alumni Council.

institute.net.in

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Creating awareness through curated experiences and opportunities for practical learning of healthy habits, nutrition, and lifestyle choices relevant to our personal contexts are essential parts of wellness facilitation. And form the core philosophy of āyushća.



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This material is prepared by the āyushća Project Management Team of the Forum. The Forum Council is manned by a group of alumni drawn from various mission organisations of the IIT Alumni Council. None of the Council members has received any remuneration for the services rendered. No sponsorship or fee has been received for the same.

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This is a strictly confidential document which can be shared with members of the investment committee of MegaFund and the various stakeholders and potential partners of the project.

2024@Forum dated 30.1.2024
Document ID: goa.iitcouncil.org



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# annexure.

## contact.



. An IIT Alumni Council initiative .

Get in touch with us for a free, no-strings-attached conversation about what Forum CRP can do for you.

To ensure adequate impact and in order to focus on large initiatives, we typically look for clients with a USD 250 million or more remediation budget in a 3-4 year time frame.

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