3D Printing

Patent Landscape Report

Sample

This sample report showcases a landscape of advancements in 3D printing technology by analyzing 589000 patent from 2010 to 2025.

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Executive Summary

This sample report showcases a landscape of advancements in 3D printing technology by analyzing 589000 patent from 2010 to 2025. The analysis reveals:

Explosive Growth

Since 2010, patent filings have experienced a substantial increase, rising by a factor of nine. In 2024, a total of 8,682 new patents were filed, while 19,977 applications remain pending at present.

Geographic Dominance

The United States leads the global patent landscape, accounting for 45,219 patents, representing 76.7% of the total. It is followed by Europe, with 6,792 patents, and China, ranking subsequently.

Technology Focus

Prominent sectors of innovation encompass additive manufacturing processes (B29C64), advancements in material technologies, and the development of precision control systems.

Market Potential

The 3D printing industry is forecasted to attain a market value ranging from $37.4 billion to $149.4 billion by 2030, with a compound annual growth rate (CAGR) between 16.4% and 20.5%.

Methodology

The methodology employed in this report integrates AI-driven data analytics, machine learning algorithms, and expert human analysis, thereby ensuring a thorough and precise assessment of patent trends within the 3D printing sector.

Data Collection

The analysis initiates with the collection of patent metadata from reputable global patent databases, including:

- WIPO PATENTSCOPE (World Intellectual Property Organization)
- Lens.org
- USPTO (United States Patent and Trademark Office)
- EPO (European Patent Office)
- National Patent Offices

These datasets encompass structured metadata, including patent titles, abstracts, claims, classifications (e.g., IPC, CPC), applicants, publication dates, citations, and legal status.

AI & Machine Learning Analysis

Using proprietary artificial intelligence (AI) and machine learning models developed by STIMAnalytics, the acquired patent data undergoes the following processing stages:

- Text Mining and Natural Language Processing (NLP): Extracting critical technical terms, concepts, and innovation themes from patent documents.
- Clustering and Classification: Categorizing patents into relevant technological groups and subgroups.
- Trend Analysis: Identifying growth trajectories, emerging technologies, and shifts in innovation focus over time.
- Network Analysis: Mapping interrelationships among applicants, technologies, and jurisdictions.
- Predictive Insights: Forecasting future technological advancements and market trends based on historical and contemporary patenting activities.

Reporting Infrastructure

The analytical results are subsequently integrated into a robust reporting infrastructure, which autonomously generates structured reports and interactive dashboards. These outputs are further enriched with:

- Visual Analytics (charts, graphs, maps)
- Strategic Insights
- Technology Roadmaps
- Company and Academic Profiles

Expert Review

Finally, all reports undergo a rigorous quality assurance process conducted by domain experts and technical editors to ensure:

- Accuracy of technical interpretation
- Consistency in terminology and classification
- Relevance of strategic insights
- Professional formatting and readability

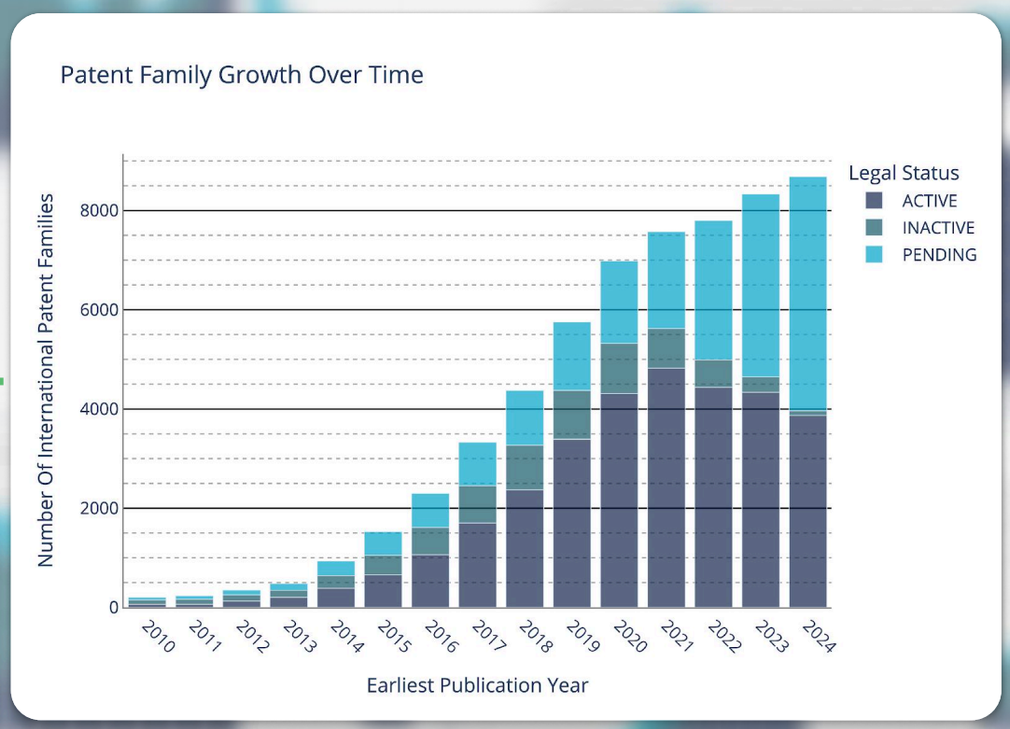
Delivery Formats

The final outputs are delivered in two formats:

- Written Report (PDF): A comprehensive, publication-ready document featuring executive summaries, technology breakdowns, market insights, and key player profiles.
- Interactive Dashboard: A web-based platform enabling users to explore patent trends, filter by technology, applicant, jurisdiction, and time period, and generate customized reports.

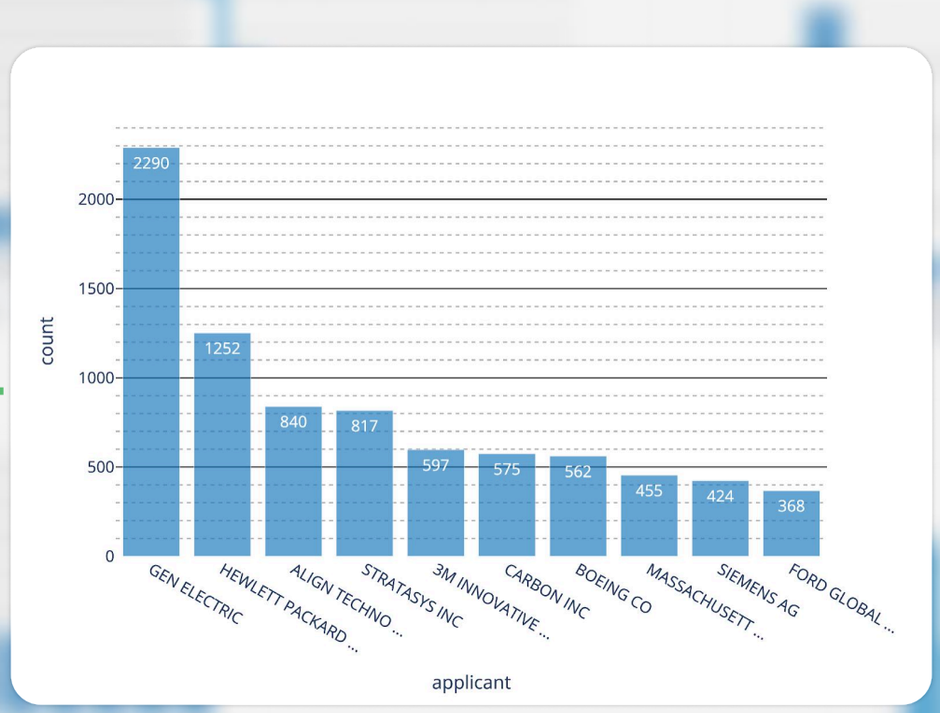
Technology Trends

Patent Landscape Overview



The sharp rise in total patent families since 2017, driven by a surge in pending filings, indicates a sustained acceleration in innovation activity, with 2024 reaching the highest volume of new technological developments.

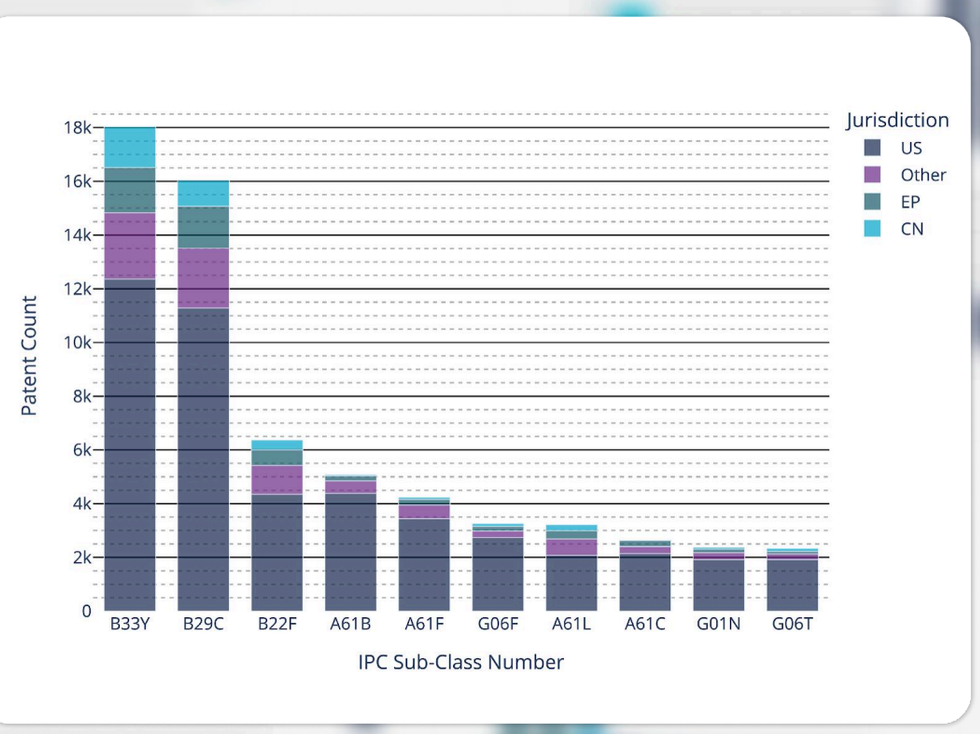
Top Patent Applicants



General Electric leads innovation intensity with 2290 filings—over 80% more than the second-highest applicant—indicating a dominant role in patent-driven R&D compared to peers in the advanced manufacturing and tech sectors.

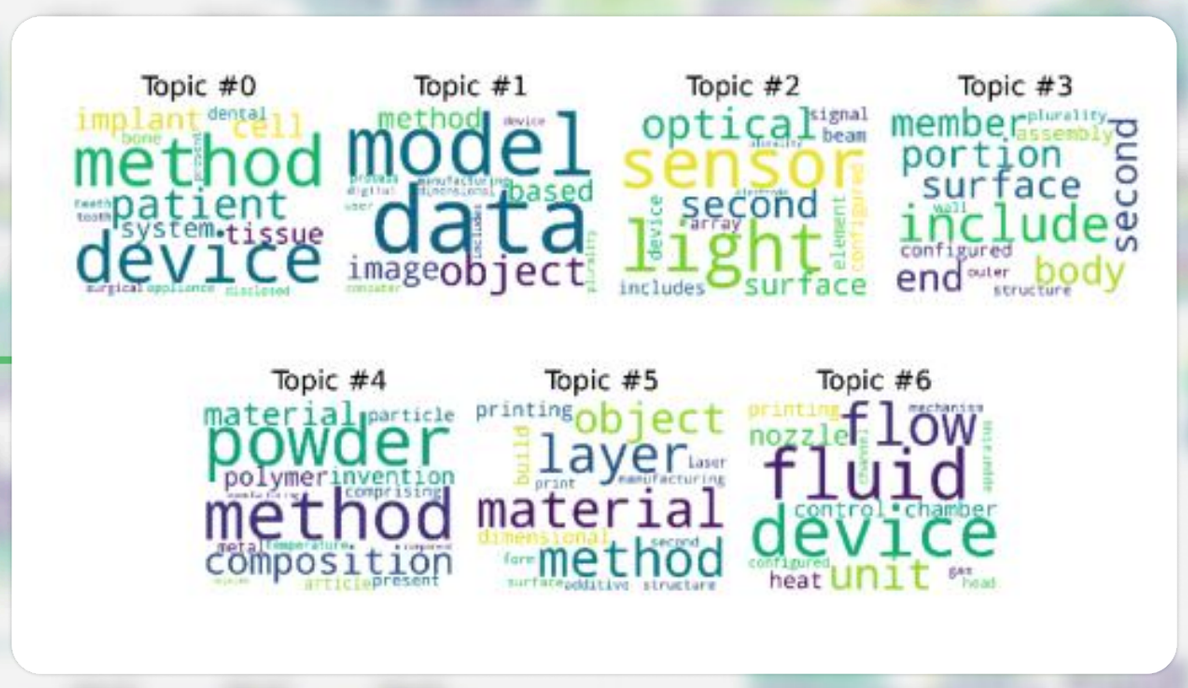
Technology Trends

Top Technologies by Sub-Class



The top two technologies by patent volume are additive manufacturing (3D printing) and plastic molding/shaping techniques, indicating these are the most actively innovated areas globally, especially in the United States.

Key Patent Themes



Strategic Recommendations:

Policy Makers

1. Focus on metal additive manufacturing for aerospace and medical applications.
2. Invest in multi-material capabilities.
3. Develop industry-specific solutions (e.g., dental aligners).

Investors

1. Prioritize companies with strong intellectual property in:
    1. Process control systems
    2. Novel materials
    3. AI-driven optimization
2. Monitor emerging applications in construction and bioprinting.

Manufacturers

1. Support standardization efforts.
2. Fund academic-industry collaborations.
3. Develop recycling protocols for 3D printing materials.

Our Industrial Expertise

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Exploring innovations in the oil, gas, electricity, and renewable energy sectors.

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