Indian Patent Data Analysis & Insights – 2019
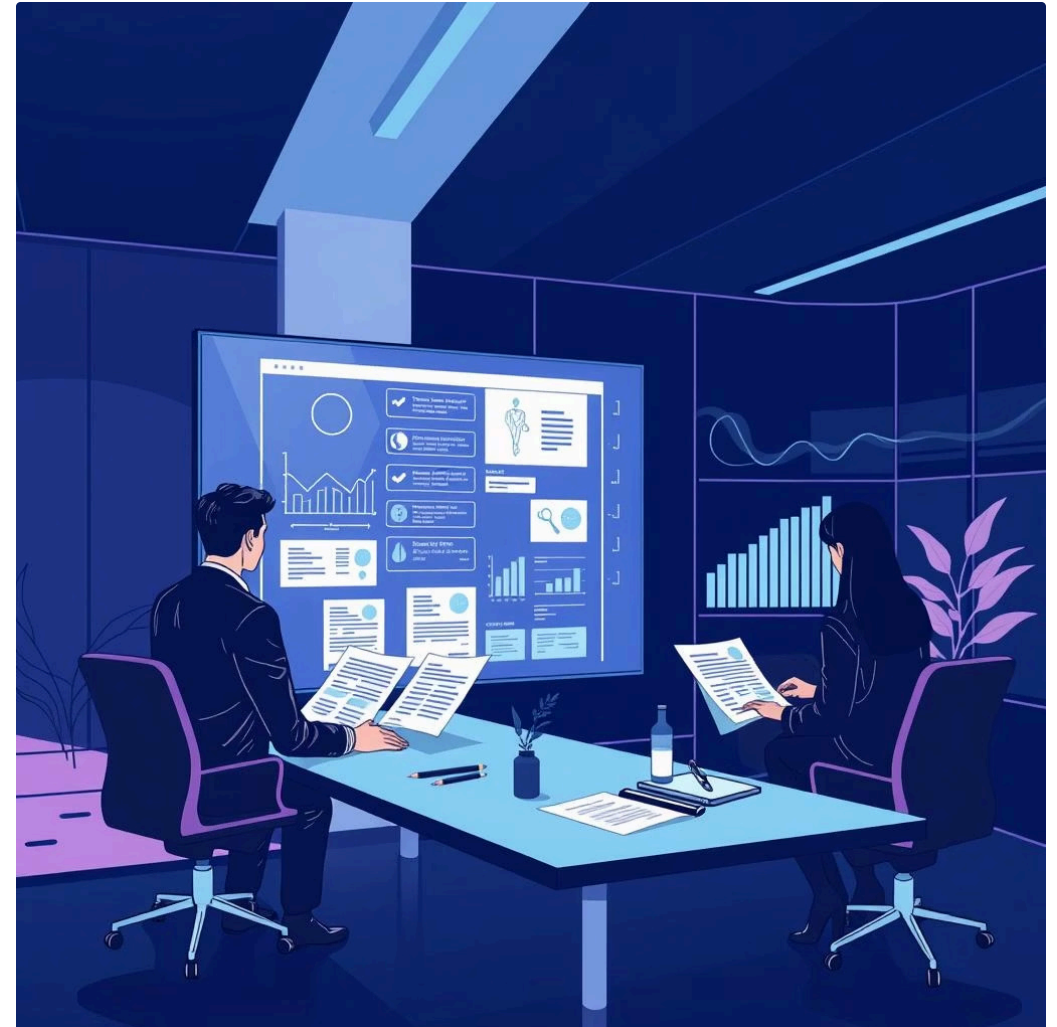
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Empowering IP Strategy Through Data

Our client, an IP consulting firm, needed a robust solution to analyze Indian patent filing and granting trends for 2019. This analysis is crucial for guiding their clients' R&D and patent strategies.

Key Objectives for the Dashboard

1

Data Cleanup

Cleanse a large, often messy, patent dataset.

2

KPI Calculation

Calculate essential KPIs: total patents, grant rate, average grant time.

3

Identify Trends

Pinpoint top applicants and technology areas.

4

Interactive Dashboard

Develop an intuitive Power BI dashboard for exploration.

From Raw Data to Refined Insights
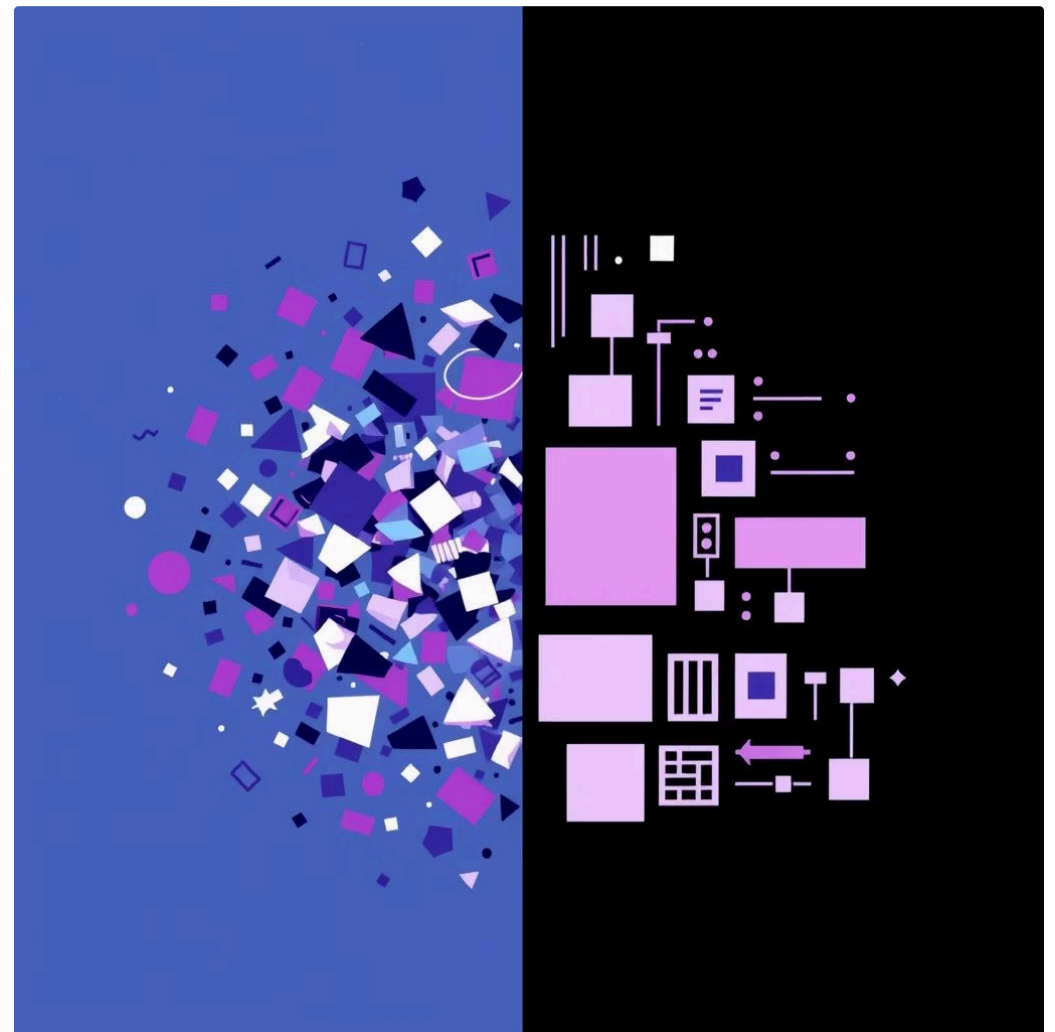
Data Source

We sourced 2019 Indian patent data from a public Kaggle dataset. This provided a comprehensive, albeit raw, foundation for our analysis.

Initial Challenges

- Missing values and duplicates.
- Inconsistent applicant names and data formats.

Cleaning Process

Leveraging Excel and Power Query, we meticulously cleaned and standardized the dataset, ensuring accuracy and consistency across all fields.

Key Performance Indicators (KPIs)

In Power BI, we crafted precise measures to translate raw data into actionable insights.

Total Patents

Overall volume of applications filed in 2019.

Granted Patents

Number of applications successfully approved.

Grant Percentage

The ratio of granted patents to total applications, indicating success rate.

Average Grant Time

Calculated as the duration between publication and application dates for granted patents.

Interactive Power BI Dashboard Overview

The dashboard provides a dynamic view of 2019 Indian patent landscape. (Imagine a live demo here)

- **Top KPIs:** Instant summary of overall patent activity.
- **Top Applicants:** Bar chart highlighting leading innovators.
- **Slicers:** Filter data by technology field and patent status for granular analysis.
- **Grant Time Metric:** Crucial insights into processing efficiency.

Strategic Advantages for IP Firms

Identify Leaders

Pinpoint top innovators and companies driving patent activity.

Assess Success Rates

Evaluate patent grant success rates and processing timelines.

Understand Trends

Gain clear insights into industry and technology trends.

Data-Driven Decisions

Enable informed IP portfolio management and client advising.

Key Learnings from the Project

Challenges Faced

- Cleaning extensive null and duplicate data entries.
- Managing complex data relationships within Power BI.
- Optimizing DAX formulas for efficient calculations.

Skills Enhanced

- Advanced data cleaning and transformation techniques.
- Proficiency in DAX formula creation for intricate KPIs.
- Designing user-friendly and impactful Power BI dashboards.

Future Enhancements & Expansion

The dashboard can evolve to offer even deeper insights and broader utility.

Automated Data Refresh

Integrate with live patent databases for real-time updates.

Multi-Year Trend Analysis

Expand to include historical data for long-term trend identification.

Geographic Mapping

Visualize applicant locations to identify regional innovation hubs.

Competitor Benchmarking

Add features to compare client performance against key competitors.

Thank You!

Questions & Discussion

I'm happy to answer any questions you may have about this project or the insights gleaned from the dashboard.