Patent Analytics in India (2018–2022)

Introduction

Objective: Analyze Indian patent filing trends between 2018–2022. Tools Used: Power BI (for cleaning, modeling, dashboard creation). Dataset: Indian Patents dataset (~20,000 records across 5 CSVs).

Data Preparation

- Merged multiple yearly CSV files (2018–2022). - Cleaned duplicates, standardized column names. - Handled missing values in Assignee, Technology Field, and Family Size. - Created measures in DAX: * Total Patents = COUNTROWS(Patents) * Patents by Status * Top Assignee Analysis * Yearly Growth KPI

Exploratory Insights

- Status-wise distribution → Granted patents dominated (11,029). - Yearly trends → Growth in 2019–2020, dip during 2021 (pandemic impact), recovery in 2022. - Technology Field Analysis: * Mechanical → highest claims count. * Electronics → highest citations. - Assignee Insights: * Tata Consultancy Services filed most patents (1424). * Siemens, Infosys, and Wipro followed.

KPI Tracking

- KPI: Annual patent growth with a target benchmark (10% increase YoY). - 2020 met/exceeded target, 2021 fell short, 2022 recovery observed.

Dashboard Summary

Visuals Included: - Status-wise donut chart. - Yearly trend line (2018–2022). - Assignee bar chart (Top 10). - Technology field vs claims/citations. - KPI card with target indicator. - Narrative insights (auto-generated).

Conclusion

- Patent filings in India show growth overall with some pandemic impact. - IT & Mechanical domains dominate patent filings. - Top companies like TCS and Siemens India lead IP generation. - Useful for policymakers, IP analysts, and corporate R&D; teams.