Vinay Purushothama

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PROFESSIONAL SUMMARY

Skilled in data analysis with 2.8 years of experience leveraging SQL, Python, and Tableau to identify opportunities to improve product & process performance, and drive data-backed decision-making with a focus on causal inference. Experienced in statistical analysis, hypothesis testing, basic ML techniques and building scalable data solutions.

EXPERIENCE

Senior Engineer (Analyst) March 2022 - Present
Bosch Global Software Technologies *Bangalore*

- Utilized **Python** (Pandas, NumPy, Scikit-learn) for end-to-end data processing, writing reusable scripts for data cleaning, feature engineering, statistical testing for production and customer datasets.
- Used **advanced SQL** (CTEs, joins, window functions) to consolidate customer data from multiple sources and generated a unified dataset for churn analysis and modeling.
- Designed and automated **KPI dashboards** in **Tableau/Excel** to monitor trends such as downtime, throughput, and quality metrics, supporting leadership in operational and strategic decision-making.
- Partnered with cross-functional teams to implement data-driven scheduling, planning, and optimization strategies, driving a **14.6%** improvement in output efficiency and initiatives projected to reduce service calls by **25%.**

Engineer August 2017 - March 2022
Dover India PVT LTD *Bangalore*

- Executed problem-solving strategies with calculation using Excel, structural simulations, RCA via fishbone diagrams.
- Involved cross functional collaboration to optimize production of industrial ovens by assisting in functional testing.

PROJECTS

Customer Churn Prediction using Regression Techniques (Company Project) November 2024

- Extracted and consolidated customer records from multiple relational tables using Advance SQL techniques such as window functions, joins and aggregations to build a unified dataset of 6k+ records.
- Performed rigorous data pre-processing including handling missing/ outlier values, feature transformations, and exploratory analysis across demographics, engagement, and financial metrics.
- Conducted uni-variate, bi-variate, and statistical significance testing to identify key churn drivers such as delayed payments, low marketing engagement score, and high ticket resolution times.
- Developed and validated a logistic regression model with cross-validation, achieving AUC of 0.82, interpreted coefficients via odds ratios, identified key risk factors (long upgrade gaps and login frequency, low platform engagement) to enable targeted retention strategy.

Data-Driven Optimization of Manufacturing Output and Shift Performance (Company project) March 2024

- Analyzed engine ECU production data using statistical tests (ANOVA, KW, T-tests) to identify bottlenecks across machines, shifts and manpower, helping uncover root causes of output delays.
- Discovered machines with long production times and frequent downtimes, leading to 14.6% improvement in manufacturing output in 2023.
- Collaborated with plant teams to optimize machine scheduling and manpower planning, resulting in improved shift efficiency and throughput via data-driven changes.
- Designed interactive Tableau dashboards to visualize KPIs, such as downtime trends and shift performance for stakeholders. Supported plant managers and senior leadership in making timely, data-driven operational decisions.

Supply Chain Optimization (Capstone Project) (Github) July 2023

- Analyzed 1L+ logistics records to identify inefficiencies in delivery across route types, days, and regions - focusing on actual vs. predicted delivery times and resource utilization patterns.
- Used OSRM routing API data, Python libraries and visualization tools (Tableau) for exploratory data analysis and feature engineering.
- Identified that carting is up to 6 times faster than Full truck load for certain deliveries; discovered 18.5% peak delivery day, allowing targeted resource optimization and improvement in routing accuracy.

CERTIFICATIONS

Data Science and Machine Learning Scaler Academy (Link) October 2023

- Completed a comprehensive program in SQL, Python, Excel, data visualization, statistics, and machine learning (supervised, unsupervised).
- Applied concepts through multiple industry case studies and business problems, gaining hands-on experience in translating data into actionable insights for real-world scenarios.

SKILLS

Computer Languages: SQL, Python, Machine Learning, Python, SQL
Data Tools: Power BI, NumPy
Software Packages: Excel, Pandas, Matplotlib, Excel, MySQL
Soft Skills: Decision-making
Others: Microsoft Office, Tableau, Problem-Solving