Prakash Sai Alla

+1 (413) 315-1598 – prakashsaialla34@gmail.com – LinkedIn – Portfolio – Github – Boston, MA

SUMMARY

Business Analytics Graduate Student at UMass Amherst specializing in data analysis, predictive modeling and BI reporting. Built ML models at 84% accuracy, automated ETL pipelines, reducing analyst time by 20%, and surfaced revenue insights from over 50,000 records. Skilled in SQL, Python, Power BI and Tableau - delivering dashboards and stakeholder reports.

SKILLS

Technical Skills: Python, Advanced SQL, Excel (Pivot Tables, VLOOKUP), Power BI, Tableau, R, Git
Data & Analytics: Data Visualization, Data Modeling, Predictive Analytics, Statistical Analysis, Machine Learning
Business Intelligence: Dashboard Development, KPI Design, Data Storytelling, Executive Reporting
Data Engineering: ETL Processes, Data Cleaning & Transformation, Data Warehousing Concepts, A/B Analysis
Soft Skills: Business Communication, Stakeholder Management, Problem Solving, Critical Thinking, Team Collaboration

EXPERIENCE

PHN Technologies Pvt Ltd, Machine Learning and Data Science Intern *Apr 2023 – Jul 2023*

- Audited 5+ structured and unstructured datasets using Python and SQL to identify data quality anomalies and inconsistencies, improved executive reporting reliability by 15%, resolving critical issues undetected for 6+ months.
- Designed and deployed automated ETL pipelines for data cleaning, transformation and validation across 5+ datasets, reducing analyst preprocessing time by 20% and eliminating repetitive manual workflows to improve team efficiency.
- Built and evaluated 3 end-to-end ML models including House Price Prediction, Iris Classification and Resume Parser using Python, Pandas and Scikit-learn, achieving production-ready performance benchmarks across all three use cases.
- Engineered a predictive pricing model using advanced feature engineering and regression analysis, outperforming baseline by 12%, delivered stakeholder-ready dashboards translating complex model outputs into actionable business recommendations.
- Presented data findings and model outputs to senior data scientists, translating technical results into clear business narratives and supporting data-driven decision-making across multiple analytical use cases.

PROJECTS

Health Insurance Premium Prediction *Python, Scikit-learn, SQL*

- Developed and trained a multiple regression model using Scikit-learn and SQL on 10+ demographic and medical risk variables to predict health insurance premiums, achieving $R^2 = 0.84$ and performing comparably to actuarial benchmarks.
- Conducted in-depth feature importance analysis identifying Age and BMI as the top two premium variance drivers, delivering a data-backed risk segmentation framework that reduced mispricing risk and improved actuarial accuracy.
- Built an end-to-end predictive analytics pipeline covering data cleaning, feature engineering, model training, and evaluation; produced stakeholder-ready visual reports translating model outputs into actionable underwriting recommendations.

Airbnb Demand & Availability Forecasting *Python, Pandas, Time-Series Analysis*

- Collected and processed 50,000+ Airbnb listings using Python and Pandas, engineering time-series features to model seasonal demand shifts, booking patterns and price elasticity across multiple high-demand urban markets.
- Developed and validated demand forecasting models using time-series analysis to identify peak-season pricing windows and occupancy trends, enabling data-driven revenue strategy recommendations for hosts and market planners.
- Translated model outputs into a stakeholder-ready analytical report highlighting key revenue optimization levers, projecting measurable improvements in listing performance and occupancy rates against comparable market benchmarks.

Optimal Places to Live in the USA Dashboard *Excel, KPI Modelling*

- Designed a weighted KPI scoring model in Excel across 10+ socioeconomic and employment indicators to systematically rank and evaluate all 50 U.S. states, enabling a data-driven single-screen decision tool for relocation strategy.
- Identified the top 5 states with composite scores 30%+ above the national median by applying advanced Excel functions including Pivot Tables, VLOOKUP and conditional aggregations to process and normalize multi-variable datasets.
- Distilled complex multi-variable analysis into an executive-ready interactive dashboard, translating socioeconomic trends and employment patterns into clear, actionable relocation recommendations for strategic decision-making.

EDUCATION

University of Massachusetts Amherst, Isenberg School of Management *Sep 2024 – May 2026*
Master of Science, Business Analytics *GPA: 4.0*

Jawaharlal Nehru Technological University Hyderabad *Nov 2020 – Aug 2024*
Bachelor of Technology, Artificial Intelligence and Machine Learning

CERTIFICATIONS

- Microsoft Azure AI Fundamentals (AI-900)
- Career Essentials in Data Analysis – Microsoft / LinkedIn
- Machine Learning & Data Analytics – Infosys
- Silver Medal in NPTEL's The Joy of Computing with Python – IIT Madras