Rahul Teja Bolloju

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Summary — Entrepreneurially driven Data Science Strategist with a passion for leveraging analytics to drive growth and innovation. Skilled in delivering data-driven solutions that enhance business performance and unlock strategic value.

Experience

Pitney Bowes **Stamford CT**
Data Scientist (SendPro C Lite) *August 2023 – Present*

- Reduced **customer churn by 10%** through the development and deployment of **machine learning** models (Random Forest, XGBoost) using **Python**, achieving an **AUC-ROC score of 0.87**.
- Extracted and cleaned customer data using **SQL**, and implemented ARIMA and Holt-Winters models to forecast churn, leading to a **15% reduction in customer attrition** through targeted churn prevention strategies.
- Visualized model performance using **Alteryx's ROC curve tool** and precision-recall charts, ensuring clear communication of model accuracy to stakeholders.
- Optimized pricing strategies using **statistical** techniques like Bayesian optimization and hyperparameter tuning, improving **model accuracy by 20%** and increasing **customer lifetime value by 10%**.
- Developed and deployed customer support chatbots using **Python** and LLMs (GPT-4, Ollama), improving customer satisfaction by 20%, reducing response time by 35%, and increasing customer retention.
- Conducted peer reviews and implemented test plans to validate churn model datasets, ensuring data accuracy and integrity for customer retention analysis.

Data Science Intern (SendTech) *July 2023 – April 2024*

- Predicted defaulters using a machine learning **XGBoost model in Python**, achieving a **0.76 AUC score** to enhance high-risk customer outreach strategies.
- Orchestrated the creation of a **Power BI dashboard**, improving debt visualization based on stakeholder input for actionable KPIs.
- Unified and analyzed **multi-source data using SQL**, processing **12 million records** to optimize debt collection and improve agent productivity.
- Led analytical initiatives for Pitney Bowes' top 200 clients, refining ARIMA and Prophet models in Python for **time series forecasting**.
- Reduced **MAPE by 15% for 60%** of clients using client-specific logic, enhancing model precision with advanced cross-validation.

FonkR Solutions **Hyderabad, India**
Data Scientist *June 2020 – July 2022*

- Conducted **web scraping with Python** (Beautiful Soup) and **SQL for data extraction**, developing **Power BI/Plotly dashboards** to uncover purchasing trends and provide actionable insights that optimized business strategies.
- Achieved **88% accuracy** in sentiment analysis using **machine learning algorithms** (SVM, logistic regression) to assess customer satisfaction, improving customer experience by 20%.
- Applied **agile methodologies** to optimize data quality, achieving a 20% improvement in data accuracy and a 15% reduction in errors through continuous process improvements and data governance.

Education

Michigan Technological University **April 2024**
Master of Science in Data Science, Houghton MI

Skills

Programming & Scripting: Python, SQL, R
Statistical & ML Techniques: Time Series Forecasting (ARIMA, Holt-Winters, Prophet), Anomaly Detection, Random Forest, XGBoost, Logistic Regression, SVM, Causal Inference (basic exposure), Bayesian Optimization
Data Analysis & Modeling: Predictive Modeling, Statistical Inference, Cross-Validation, Experimental Design, Model Evaluation (AUC-ROC, Precision-Recall)
Data Handling: Data Wrangling, ETL Pipelines, Multi-source Data Integration, Schema Design (Star, Normalized)
Visualization & Reporting: Power BI, Tableau, Plotly, Matplotlib, KPI Dashboards, EDA, Alteryx

Projects

Houghton Gas Station Statistical Analysis: Reduced wait times by 20% at peak hours using Two-way ANOVA in R for bottleneck analysis and statistical modeling.
Time Series Forecasting For Mortality: Predicted U.S. mortality trends using CDC data by building XGBoost and regression models (92% R^2) using Python, uncovering top causes of death to support public health strategies.

Publications

"**Husky Voice - An Innovative Voice Assistant**", MBAA International Conference, 2023
"**Digital Handwriting Recognition Using Hand Tracking by Using Media Pipe and OpenCV Libraries**", IJRASET