AJAY ARAKH

DATA ANALYST / MACHINE LEARNING ENGINEER

9579852657 arakhajay42@gmail.com

ABOUT ME

Analytical and detail-oriented Data Analyst with strong proficiency in statistical analysis, data visualization, and machine learning techniques. Eager to leverage data to uncover trends, optimize processes, and drive impactful business decisions. Experienced in handling large datasets, building predictive models, and translating complex insights into clear, actionable strategies for both technical and non-technical audiences. Seeking to join a forward-thinking organization where I can contribute to data-driven innovation and continuous growth.

EXPERIENCE

Oct24 - Present

Bajaj Finserv Ltd

Unit Manager - Analytics (DMS COE)

- Getting requirements from stake holders and trying to build effective solutions for collection through data analytics and machine learning models.
- Developed and maintained machine learning models specifically for Collections in the Personal Loan Cross Sell (PLCS) and Consumer Durable (CD) verticals to optimize recovery strategies and improve collection efficiency.
- Designed and deployed Logistic Regression models to predict customer repayment behavior, delinquency risk, and likelihood of default, enabling targeted collection efforts.
- Monitored model performance regularly using Population Stability Index (PSI) and Characteristic Stability Index (CSI) to identify data drift and ensure model stability over time.
- Contributed to FinBot, an LLM-based customer support chatbot using LangChain and HuggingFace to interpret FAQs, policies, manuals with LLM powered reasoning.
- Collaborated with collections and risk teams to integrate model outputs into collection workflows, enhancing segmentation and prioritization of customer follow-ups.
- Ensured compliance and audit readiness by documenting model development, validation, and monitoring processes.
- Continuously improved models through retraining, feature engineering, and performance evaluation based on updated repayment patterns and portfolio behavior.

Apr23 - Oct24

Bajaj Finserv Ventures Ltd

Unit Manager - Analytics (DMS COE)

- Developed Risk of Flow models for Credit Card collections, targeting PDD (Pre Due Date), PreX, and Write-off customer segments to enhance recovery efficiency.
- build end to end solutions for variety of business problems, which includes building strategies and machine learning models on platforms like **Azure Databricks, Jupiter notebook, SMS(SQL),** and **SAS.**
- Conducted in-depth business problem analysis and delivered data-driven solutions aligned with operational priorities.
- Presented analytical findings and ML insights to cross-functional stakeholders including product, risk, and collections teams for informed strategy implementation.

EXPERIENCE

Mar21 - Oct24

Bajaj Finserv Ltd

Unit Manager - Analytics (DMS COE)

- Understanding the Business problem & generating insight from data.
- Developed the Collections Risk of Flow model in Python i.e logisctic regression to predict movement of delinquent customers across delinquency buckets.
- Contributed to automating reporting processes, reducing daily manual work by ~2 hours.
- Performed regular monthly model execution and monitored for drift and performance degradation.
- Supported risk and collection teams in integrating model insights into business operations.

TECHINICAL EXPERTIES

Methodologies	• Agile • Waterfall • Data-Driven Decision Making
Programming Languages	• SQL , Databricks SQL, Sparks SQL, T-SQL • Python • Data-Driven Decision Making
Databases & Data Warehousing	• MySQL, Databricks , SQL Server
Data Tools & Technologies	• Excel (Advanced) • Databricks • Jupyter Notebook • Sql Server management studio (SSMS)
Machine Learning & Statistical Modeling	• Regression Models • Clustering Models
Generative AI	• LangChain Framework • HuggingFace Models

PROJECTS

1 . FinBot – LLM-Powered Financial Chatbot

- Developed an AI chatbot capable of understanding financial documents and customer FAQs using LangChain and HuggingFace models.

2. Allocation Models for PLCS and SAL

- Developed ML models using Logistic regression to classify delinquent customers for routing to either field agents or telecalling teams. Segmented customers into five categories based on allocation probability. Evaluated model performance using rank order validation.

3 . Credit Card Risk Models for PDD, PreX & Write-off

- Credit Card Risk Models for PDD, PreX & Write-off
- Designed Risk of Flow models for Credit Card customers across PDD, PreX, and Write-off segments. Monitored ~2 million accounts monthly and prioritized outreach strategies, contributing to a 6% improvement in recoveries from early-stage delinquencies.

PROJECTS

4. Digital Payment Propensity Model

- Designed Digital Payment Propensity models for PLCS and SAL segments.
- This project aims to develop a machine learning model to predict whether PLCS and SAL customers will pay their dues digitally.
- By understanding this propensity to pay digitally, the model will enable targeted communication and optimized collection strategies, ultimately increasing digital payment adoption and reducing operational costs.

5. Reporting Automation

- Built automated workflows that fetched raw Excel/CSV files from Outlook or Databricks, processed them in Databricks using Python and SQL, and emailed the cleaned and enriched output back to respective teams. This solution saved over 10 hours weekly in manual effort, reduced reporting errors by 90%, and enabled timely, daily insights for operations and collections.

EDUCATION

2019
Pune University

BE (Electronics and Telecommunication Engineering)
from : Sanjivani Collage of Engineering,Kopargaon

2013
MSBTE

Diploma In Electronics and Telecom
Government Collage of Polytechnique, Aurangabad