

Harsh Kumar

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SKILLS

Languages: Python, C, Go

ML Libraries: Pandas, Numpy, scikit-learn, XGBoost, fbprophet, TBATS, statsmodels, SHAP, NLTK, spaCy, PyTorch, Transformers

Data Technologies: PostgreSQL, MySQL, Snowflake, MongoDB, PySpark, Polars, Metabase, Selenium

Cloud Technologies: AWS Sagemaker, S3, EC2, Step Functions, Lambda Functions

Development Tools: Git, Docker, Kubernetes, Jenkins, Github Actions, Bash, PowerShell

Others: HTML/CSS, Jira, Confluence, \LaTeX , Markdown

WORK EXPERIENCE

DECISION SCIENTIST | ONE

Bengaluru | 2024 – Current

- **Overdraft Default Risk**

- Created a probability scorecard to estimate the likelihood of a customer with overdraft limit to default on repayment.
- Built a feature library from scratch containing over 2000 features in PySpark.
- The scorecard helped shape the strategy which reduced the fraud rates by almost 20%.
- Productionized the model while building the code template for all Machine Learning models in the organization

- **ACH Transaction Risk**

- Contributed to the development of a real-time transaction model.
- Shaped the design of the feature calculation pipeline.
- The model is projected to reduce fraud loss by over 10% while simultaneously improving customer experience.

DATA SCIENTIST | OHM MOBILITY

Bengaluru | 2023

- **Sales Database**

- Designed an electric vehicle sales database from scratch which was used for all subsequent business decisions.
- Developed a data-mining script to fetch data from public VAHAN dashboard using Selenium.
- Created a data model to store the data in postgresql and built dashboards using Metabase.

- **IoT Dashboard**

- Integrated daily IoT data of electric vehicles from multiple sources and created dashboards to generate visibility.
- Generated financial insights based on the usage pattern of the electric vehicles

DATA SCIENTIST | ZESTMONEY

Bengaluru, KA, IN | 2022 – 2023

- **Affordability Estimation from Cibil data**

- Performed data cleaning and segmentation on the CIBIL data of a large population set to get a better estimate of EMI obligation for the customers.
- Performed extensive market research to improve the data quality through heuristic methods.
- Improved the EMI prediction of Gold Loans by over 10%.

- **Volume projection of calls, emails and chats for workforce management**

- Designed a statistical time series using that reduced call disconnect rate from over 50% to under 20% during peak hours.
- Experimented with algorithms like ARIMA, SARIMA, fbprophet, and TBATS to account for multiple seasonality in data.

- **Fraud likelihood estimation to reduce credit risk**

- Experimented with over 2000 features from 8 different data sources to produce an updated fraud detection model improving performance by up to 20%
- Created a new insight of segregating the customer base based on online vs in-store onboarding.
- Created a service API aggregating 8 different data sources with a latency of 200-400ms.

- **Model Monitoring**

- Helped create the model monitoring framework for all the deployed model at Zestmoney.
- Produced data visualization to improve visibility into model performance.

- **Collections models to prioritize loan recollection strategy**

- Took ownership of multiple models used to optimize collections.
- Created detailed workflows to manage loan collection strategies.

- **AutoML Platform**

- Helped build an internal ML platform for automatic modelling of internal financial data.

- Built the ELT pipeline in Polars for over 1000 CIBIL features while improving the latency by 40%.

TEACHING ASSISTANT (TA) | UNIVERSITY OF MISSOURI-COLUMBIA

Columbia, MO, US | 2018 - 2019

- Taught problem solving skills to over 100 pre-calculus and calculus-I students including on-one mentoring.

EDUCATION

B.S. in Mathematics and Scientific computing

INDIAN INSTITUTE OF TECHNOLOGY KANPUR (IIT KANPUR)

Kanpur, India | Jul 2012 — Jun 2016

GPA 8.4

M.S. in Mathematics and Scientific computing

INDIAN INSTITUTE OF TECHNOLOGY KANPUR (IIT KANPUR)

Kanpur, India | Jul 2016 — Jun 2017

GPA 9.1