

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, Keras, TensorFlow, Transformers

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

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

DATA SCIENTIST | ZESTMONEY

Bangaluru, KA, IN | 2022 – Current

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

- Designed a statistical time series using that reduced error in the daily call volume prediction from an average of 40% to 15%.
- This resulted in decrease in the call disconnect rate from over 50% to under 20% during peak hours.
- Experimented with algorithms like ARIMA, SARIMA, fbprophet, and TBATS.
- Coordinated with the customer relations team to optimize the employee work hour allotment resulting in increased customer satisfaction rate.

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

- Experimented with over 2000 features from 8 different data sources to produce a new fraud detection model.
- Improved the previous performance by approximately 20%.
- Created a new segmentation of customers based on online vs instore onboarding.
- Created a service API aggregating 8 different data sources with a latency of 200-400ms.
- Introduced SHAP feature importance for model assessment to the data science and risk analysis teams.

- **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.
- Improved the EMI prediction of Gold Loans by over 10%.

- **Model Monitoring**

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

- **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 | Aug 2018 - Dec 2019

- Taught problem solving skills to over 100 pre-calculus and calculus I students.
- Performed one-on-one mentoring with students during office hours.

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