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: PostgresSQL, MySQL, Snowflake, MongoDB, PySpark, Polars
Cloud Technologies: AWS Sagemaker, S3, EC2, Step Funtions, 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 of call disconnect rate during peak hours from above 50% to 20%.
  - Iterations included 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.
- **Affordability Estimation from Cibil data**
  - Performed data cleaning and segmentation on the CIBIL data of a large segment of the population to get a better estimate of EMI obligation for our customers.
  - Performed extensive market research to improve the data quality.
  - Improved the EMI prediction of Gold Loans by 10%.
- **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.
- **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 pioritize 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**
  - Helped in building of an internal ML platform for automatic modelling of internal financial data.
  - Built the ELT pipeline in Polars for over 1000 CIBIL features which improved the latency by 40%.

TEACHING ASSISTANT (TA) | UNIVERSITY OF MISSOURI-COLUMBIA   Columbia, MO, US | Aug 2018 - Dec 2019

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

EDUCATION

B.S. in Mathematics and Scientific computing   Kanpur, India | Jul 2012 — Jun 2016
INDIAN INSTITUTE OF TECHNOLOGY KANPUR (IIT KANPUR)   GPA 8.4

M.S. in Mathematics and Scientific computing   Kanpur, India | Jul 2016 — Jun 2017
INDIAN INSTITUTE OF TECHNOLOGY KANPUR (IIT KANPUR)   GPA 9.1