Vyshnev S

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Experience

LTIMINDTREE March 2022 – Present
Currys plc *Bangalore, India*

- **Engineer(Data Science focus)** October 2022 – Present
- Collaborated on the iterative development of customer churn prediction system from **logistic regression** to ensemble of **XGBoost** models, achieving a **14%** churn reduction and **£12M** potential savings over 3 years.
- Expanded feature set from **22** initial features to **45+** features, incorporating time-series analysis, NLP-derived insights from customer feedback, and behavioral segmentation, resulting in model AUC-ROC from **0.73** to **0.89** for improved accuracy.
- Worked in Collaboration with software and engineering teams to deploy a scalable, real-time churn prediction pipeline on AWS, handling **50,000+** predictions per minute with **99.99%** uptime, integrating model outputs into CRM for personalized retention.
- Utilized **Explainable AI (XAI)** techniques (SHAP, LIME) to identify churn drivers, resulting in a **7%** improvement in targeted retention effectiveness.
- Incorporated methods for evaluating the training dataset used in customer churn predictions for possible inherent dataset biases that led to unequal outcomes by **5%** thus highlighting a positive metric for team.
- **Juniro Engineer(Data Analyst focus)** March 2022 – September 2022
- Utilized New Relic for real-time monitoring and analysis of application performance, identifying anomalies and providing actionable insights to ensure seamless operations.
- Managed Salesforce pipelines, ensuring data integrity, accuracy, and minimal disruptions.
- Analyzed technical issues, documented root causes, and created Jira tickets to support data-driven development.
- Collaborated across teams to resolve challenges and maintained documentation for process optimization.

Projects

End-to-End Used Car Price Prediction(Github) | *Python, Streamlit, MLFlow, DVC, Docker, AWS*

- Built a robust machine learning solution to predict used car prices.
- Created an ETL pipeline to scrape web data and store it in an AWS S3 bucket for efficient storage and processing.
- Performed exploratory data analysis (EDA), trained multiple models (including XGBoost, Random Forest and Gradient Boosting), and tracked the performance of each model using MLflow on DagsHub.
- Implemented DVC for data versioning and model tracking, ensuring the reproducibility of our experiments and managing changes in both data and code.
- Created a Docker image that contains the streamlit application, and that can be deployed in any machine.
- Created a user-friendly, containerized Streamlit application for interaction with the trained model, and deployed it on AWS EC2, making the model accessible through the internet.

Sales Forecasting System(Github) | *pandas, statsmodels, Prophet, scikit-learn, Flask, Docker*

- Developed a sales forecasting system using time series analysis to predict retail sales for the next quarter, by implementing models such as SARIMA and Facebook Prophet to capture trends and seasonality.
- Preprocessed data, handled outliers, and created lagged features for better model performance.
- Integrated external variables to improve predictive power.
- Automated training and deployment using Flask and Docker.

Education

SRI MANAKULA VINAYAKA ENGINEERING COLLEGE PUDUCHERRY, IN
B.Tech in Mechanical Engineering *Aug. 2017 – Oct. 2021*

Technical Skills

Languages: Python, SQL, HTML/CSS, C++
Libraries and Frameworks: Seaborn, Matplotlib for Data Analysis; Pandas, Numpy, Scikit-learn for Machine learning; Keras, Pytorch for deep learning; Flask, FastAPI, Streamlit, Selenium, Docker
Developer Tools: Git, Postman, PyCharm, Jupyter Notebooks, Jira, Anaconda
Databases: PostgreSQL, MySQL, SQLite
Cloud Technologies: AWS (EC2, S3, ECR, RDS, CI/CD (Github Actions)), Azure