Ravi kumar Chavva

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Projects

Customer Churn Prediction (GitHub 2023)

- Performed EDA on over 8,000 customer records, identifying key churn factors and driving actionable insights.
- Built a classification model to predict customer churn, starting with linear models like Logistic Regression and achieving **56% recall**.
- Addressed class imbalance using **SMOTE**, improving the model's generalization ability on imbalanced datasets.
- Employed Boosting algorithms such as CatBoost and Bayesian Search to fine-tune non-linear models, achieving a 30% recall improvement over the baseline logistic model, leading to **86% recall**.
- Built the model as a serverless container using FastAPI for the backend to interact with the portfolio, enabling real-time churn predictions with a response time of under 3 seconds.

Car Price Prediction (GitHub 2023)

- Trained a baseline model using Linear Regression, achieving an initial adjusted **R^2 score of 39%**.
- Enhanced model accuracy by implementing regularization techniques and conducting error analysis.
- Improved the adjusted **R^2 score to 85%** by incorporating ensemble methods like Bagging and Boosting.

IPL Score Prediction (GitHub 2022)

- Developed a machine learning model with 92% accuracy, improving sports analytics by 20% over baseline models.
- Preprocessed over 100,000 match data points using Python and Scikit-learn, and optimized model performance with **PyCaret**.
- Implemented a Flask web app for user input and predictions, driving consistent engagement.
- Deployed the solution on **Google Kubernetes Engine (GKE)**, ensuring performance, scalability, and cost efficiency.

Skills

- **Programming Languages**: Python, C, TypeScript
- **Machine Learning & Deep Learning**: Scikit-learn, TensorFlow, PyCaret, Computer Vision
- **Data Analysis & Visualization**: SQL, Polars, Statistical Analysis
- **MLOps & Cloud Computing**: Weights & biases, Azure (Adf,Databricks), Gcp (Cloud Run) , Aws (Sagemaker)
- **DevOps & Deployment**: FastAPI, Docker, GitHub Actions, Google Cloud Run
- **Other Technical Skills**: Data Structures and Algorithms, Next.js, Distributed Computing, Microservices Architecture

Education

Bachelor of Technology (B. Tech) in Computer Science and Engineering
Sri Venkateswara College of Engineering, Tirupati, India | *2021 – Present* | CGPA: 8.4/10 | Major: Data Science

Sri Chaitanya Junior College, Andhra Pradesh, India | *2019 – 2021* | Completed with 94.7%

Target English Medium School, Andhra Pradesh, India | *2010 – 2019* | Completed with 10 GPA

Certifications

Machine Learning for Engineering and Science Applications – NPTEL

Experience

Data Science / Machine Learning - ExcelR | intern   June 2024 – July 2024

- Gained hands-on experience with the **Data Science Process**, from data collection and cleaning to model deployment.
- Developed and deployed multiple machine learning models, optimizing workflows and reducing data processing time by **15%**.

Achievements

- **Initiated Data Nexus:** Founded and led a data science Association, "Data Nexus," at college to help fellow students accelerate their learning in data science through peer-to-peer sessions, workshops, and resources.