Vraj Dobariya

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San Francisco Bay Area

SUMMARY

Vraj Dobariya is a passionate AI/ML enthusiast with a proven track record of academic excellence, including a Gold Medal in Computer Science and a Top 15% rank in the GATE Computer Science exam, one of India's most competitive national exams.

EDUCATION

Master of Science - MS, Statistics Data Science

California State University, East Bay

Present Hayward, United States

- Engaging in hands-on projects that apply AI and statistical methods to solve real-world problems.
- Developing expertise in advanced statistical modeling, machine learning, and data-driven decision-making.

Bachelor of Technology - BTech, Information Technology

Adani University

Ahmedabad, India

GPA **3.9** / 4.0

- Received a gold medal for attaining a semester percentage index (SPI) of 9.79 out of 10.
- Maintained the highest academic standing in my Computer Science class for two years in a row.

PROJECTS

Credit Risk Prediction for Loan Applicants | Classification | Finance

https://ml-project-credit-risk-model-vraj-dobariya.streamlit.app/

Developed a high-accuracy credit risk assessment model using logistic regression, achieving an accuracy of 93% and a recall of 94% after handling class imbalance with SMOTE Tomek and optimizing parameters through Optuna. The model predicts the default probability (likelihood of loan default), assigns a credit score ranging from 300 to 900 to indicate creditworthiness, and provides a credit rating based on the score.

Damage Prediction | Deep Learning | Computer Vision

https://dl-project-damage-prediction-vraj-dobariya.streamlit.app/

Developed a deep learning damage prediction model using CNNs and transfer learning, starting with a baseline CNN (57.74% accuracy), then applying regularization (50.43%), advancing to EfficientNet (65.74%), and fine-tuning a pre-trained ResNet (76.70%), with hyperparameter tuning (dropout: 0.2, learning rate: 0.005) ultimately achieving 80.87% accuracy.

Health Insurance Premium Prediction | Regression | Healthcare

https://ml-project-premium-prediction-vraj-dobariya.streamlit.app/

Implemented a machine learning model to predict estimated health insurance premiums based on personal and medical attributes, achieving high accuracy across age groups: for the "Age ≤ 25" group, Multiple Linear Regression attained 98.87% accuracy, while for the "Age > 25" group, XGBoost with random search tuning achieved 99.70% accuracy.

Credit Card Launch | EDA and A/B Testing | Banking

This project analyzes customer data to identify the ideal group for a new credit card launch. Through EDA, customers aged 18-25 were identified as the top target segment. A/B testing results showed that the new card outperformed the existing one, with the null hypothesis rejected, indicating a positive effect on engagement and uptake among the target demographic.

SKILLS

Supervised & Unsupervised Learning, Regression, Classification, Clustering (K-Means, DBSCAN), Decision Trees, Random Forest, XGBoost, SVM, Naïve Bayes, PCA, Cross-Validation, GridSearchCV, RandomizedSearchCV, Bayesian Optimization, ROC-AUC, Precision-Recall, Confusion Matrix, Pandas, NumPy, Feature Selection, Encoding, Outlier Detection, Matplotlib, Seaborn, PyTorch, CNNs, RNNs, Transformers (BERT, GPT)

CERTIFICATION

Deep Learning: Beginner to Advanced

Master Machine Learning for Data Science

Math and Statistics For AI, Data Science

Python: Beginner to Advanced For Data Professionals