NIKITA DALVI

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EDUCATION

University of Southern California (Masters in Electrical and Computer Engineering) Los Angeles, CA
Courses: Probability and Statistics, Supervised Machine Learning, NLP, Database Graduating May 2024

Savitribai Phule Pune University (Bachelor of Engineering) India, June 2014-June 2018
Related skills: Data Structures and Algorithms, System Design, Project Management

SKILLS

- Programming Languages: Python, R, SQL, JavaScript, C++, Java
- Software: Docker, AWS S3, Azure, GCP, Linux, Unix, Hugging Face
- Deep Learning Frameworks: TensorFlow, PyTorch, Keras, OpenCV
- Tools and Databases: Tableau, MySQL, PostgreSQL, NoSQL, MongoDB, Git

EXPERIENCE

University of Southern California Los Angeles, CA
Research Assistant Ongoing

- Leveraging advanced computer vision and deep learning techniques to detect glaucoma through analysis of retinal images and other retinal biomarkers.
- Pursuing research to explore optimal pre-processing methodologies tailored to the field of ophthalmology.

Semio.AI Los Angeles, CA
Machine Learning Research Engineer (Computer Vision) June 2023-August 2023

- Developed an Image inpainting model that reconstructs lost part of image using Generative AI to integrate with YOLO v5 based object detection system yielding accuracy up to 89% against the baseline model achieving 72% accuracy.
- Seamlessly deployed optimized model using Hugging Face's interface API within a Flask-driven web interface.

Baker Hughes India
Graduate Engineer Trainee July 2018-August 2020

- Raised laboratory revenue from $450k to $1M by calibrating and installing Flow, Moisture, and Gas Sensors from Panametrics. Assisted in the calibration of Pressure Sensors and Air Data Test Sets.
- Involved in Health, Safety and Environmental Practices for manufacturing plant.

ACADEMIC PROJECTS

Credit Card Risk Evaluation | Python Los Angeles, CA

- Conducted an in-depth analysis of feature engineering outcomes to discern the optimal dimensionality reduction techniques for effective feature extraction in the context of credit card risk assessment.
- Implemented and deployed machine learning models utilizing Logistic Regression, Naive Bayes, and Support Vector Machine (SVM) to evaluate default credit card users. Achieved a 92% accuracy with the SVM model after systematically comparing performance metrics and addressing class imbalances in the dataset to enhance model performance.

American Sign Language Recognition | Python, PyTorch, OpenCV Los Angeles, CA

- Engineered multiple Convolutional Neural Networks to recognize 29 signs from American Sign Language in real-time with highest accuracy of 99.98% and latency of 60 milliseconds.
- Crafted an application employing these CNNs in OpenCV for efficient real-time sign language recognition.

TrojanMap | C++ Los Angeles, CA

- Created similar interface as Google Maps using data structures and algorithms including Dijkstra, Bellman-ford, Traveling Salesman Problem, Topological sort. Tested algorithm using bazel unit tests.
- Strengthened geospatial programming skills by creating and maintaining a database of geospatial co-ordinates on MongoDB.

HONORS AND AWARDS

- Awarded with "Letter of Appreciation for Extraordinary Contribution" for maximizing quarterly revenue by $300K.