VAIDIK VADHAVANA

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Education

University of Southern California Aug 2024 - May 2026
Master of Science, Computer Science
Coursework: Analysis of Algorithms, Database Systems

University of Mumbai (APSIT) Dec 2020 - Apr 2024
Bachelor of Engineering, Computer Engineering GPA – **9.28/10.0**

Work Experience

USC Viterbi School of Engineering Los Angeles, CA, U.S.A
Graduate Research Assistant Oct 2024 - Present

- Developed a multi-task deep learning model combining Vision Transformer (ViT) and ResNet50 architectures for detection of Glaucoma from fundus images, achieving 95.84% validation accuracy.
- Conducted research on large-scale datasets to obtain relevant Glaucoma data, supporting model training and validation for improved generalizability.
- Expanding model scope to include Diabetic Retinopathy detection, exploring techniques to merge it with the existing Glaucoma detection framework for a versatile ophthalmologic diagnostic tool.

EduSkills Foundation (AICTE) Mumbai, MH, India
Machine Learning Intern Jul 2022 - Sep 2022

- Leveraged advanced machine learning algorithms and executed them on Amazon Web Services using EC2 and S3 to analyze current trends of data.
- Performed extensive data cleaning and preprocessing on large datasets using Python libraries (Pandas, NumPy), improving model performance by 20% through feature engineering and handling missing values.

APSIT Skills Mumbai, MH, India
Software Developer Intern Sep 2021 - Nov 2021

- Produced detailed user guides and training materials on machine learning basics, improving comprehension among over 30 students during workshops.
- Acquired foundational skills in machine learning and AI/ML by creating impactful projects, applying object-oriented design principles and algorithms.
- Implemented machine learning algorithms to automate data analysis processes, decreasing manual workload by 50%.

Projects

APSIT Community | Python(Flask), React, MongoDB, AWS Jun 2023 - Mar 2024

- Led the development of a social media platform to encourage inter-department communication between students.
- Boosted platform security by executing JWT authentication, reducing unauthorized access by 30% and ensuring secure user authentication for 100+ users across the application.
- Collaborated with 120 students to test application, gather feedback, and implement necessary improvements, resulting in an increase in user satisfaction by iterating on improvements.
- Orchestrated AWS deployment using Amplify, Elastic Beanstalk, and S3, achieving a 40% improvement in application scalability and reducing deployment time.

NutriLytik for Diabetic Patients | Python, ML, Flutter Jun 2022 - Mar 2023

- Constructed a mobile application designed to provide diet recommendations using machine learning and scan food labels, enabling diabetic patients to effectively monitor their diets and maintain health safety.
- Engineered APIs for personalized meal plans based on a survey of 170+ diabetic patients, leading to improved dietary tracking and suggestions.
- Created OCR scanner for real-time nutritional label analysis, increasing user satisfaction by 30%.

Skills

Languages, Frameworks & Web Technologies: Python, Java, JavaScript, Solidity, C, C++, SQL
Frameworks & Web Technologies: HTML5, CSS3, Node.js, React, Flask, Django, PyTorch, TensorFlow, Scikit-learn
Databases: PostgreSQL, MySQL, SQLServer, MongoDB
Cloud and Tools: Power BI, AWS, Google Cloud, Heroku, Git, Github, Jenkins, Docker, DevOps