Vrushabh Deogirikar

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Education

Master of Science Santa Clara University, US 09/2023 - 03/2025

- Major in Computer Science and Engineering | GPA: 3.83
- Coursework: Independent Study-Mobile App Development, Distributed Systems, Machine Learning, Operating Systems

Bachelor of Engineering

Pune University, India

08/2016 - 08/2020

- Major in Computer Science | GPA: 3.43
- · Coursework: Computer Architecture, Cloud Computing, Data Structures, Object Oriented Programming, Computer Networks

Skills

- Flutter | Dart | Java | Python | C++| C# | JavaScript | React | Node | CSS | SwiftUI | Shell Scripting | SQL
- Mobile Application | Frontend | Backend | Full-Stack | OOP | Flask | RESTful API | Postman | Jira | Agile
- Cloud Computing | Git | Linux | Amazon Web Services | Docker | Kubernetes | Jenkins | Automation

Experience

Software Development Intern

Geenuity, USA

06/2024 - 09/2024

- Researched Nixtla TimeGPT, NeuralForecast, and AWS Forecast to integrate time forecasting functionality in Geenuity's AI agent.
- Developed RESTful APIs with Python using FastAPI and containerized the app on Docker. Tested APIs with Postman.
- Designed interactive user interface using Bubble, incorporating charts for visualizing time forecast API response data in JSON.
- Integrated LLMs using Flowise to develop an autonomous AI agent, capable of executing diverse tasks and optimizing content delivery.

Research Assistant Imaginarium Lab, USA 01/2024 - Present

- Developed a TikTok-like app with Flutter for Android/iOS to support research, featuring facial data and user interaction capture, video scrolling, and Firebase integration.
- Researched 3D human body mesh reconstruction from egocentric images, focusing on data collection and model development.
- Contributed to scientific publications and presented research findings.
- Conducted data analysis and visualization on app-recorded and survey data using statistical and machine learning techniques.
- Created an immersive VR escape room game with interactive UI/UX using Unity 3D engine and C++, incorporating advanced gameplay elements such as grabbable and destructible objects, sockets, puzzles, and teleportation.

Software Developer

Farmia Agricon LLP, India

04/2023 - 08/2023

- Engineered a VGG19-based deep learning model using Keras and TensorFlow for accurate classification of plant diseases from images.
- Implemented image preprocessing and data augmentation strategies, and transfer learning techniques to enhance model performance.
- Fine-tuned model through early stopping and model checkpointing, achieving high accuracy in disease classification.
- Developed an intuitive UI using Flutter, Dart enabling users to upload plant images, send them to the model through API connection and receive disease detection results.

Software Developer <u>Birlasoft, India</u> 10/2020 - 01/2023

- Promoted to MES Consultant within 18 months. Took over maintenance of NoMuda VisualFactory implemented for Proterra.
- Collaborated closely with the development team for debugging and resolving high priority issues in an agile setting.
- Completed Piston Protrusion Management System project for Cummins India Ltd., replaced old system with a new Ignition software.
- Developed SCADA HMI screens and PLC programs for building management system, chiller plant, air handler unit for Entegris.
- Curated proof of concepts for manufacturing plant on Ignition platform scripted in Python and live PLC data.

Projects

- 3D Interactive Portfolio Website: Created an immersive portfolio website featuring responsive design, interactive 3D models, animations, and an email contact form. (ThreeJS, React Three Fiber, TailwindCSS, Framer Motion) (04/2024)
- **Distributed Message Broker:** A robust publisher/subscriber model featuring fault tolerance and health monitoring through distributed brokers, data replication, multi-threading, and heartbeat protocol. (Python, Flask, AWS EC2, Linux) (06/2024)
- **To-Do List App:** Developed a To-Do List application designed for task management. Key features include the ability to add tasks, mark tasks as completed with a strike-through effect, delete tasks, and secure user login functionality. (Flutter, Dart, Hive) **(02/2024)**
- Expense Tracker: Developed an expense tracker application featuring CRUD operations for expenses, budget tracking, and detailed spend analysis. (Flutter, Dart, Hive) (03/2024)
- Netflix iOS App: Features include dynamic movie content updates, trailer playback, trending movies. (SwiftUI, UIToolkit) (09/2023)

Leadership & Volunteering Experience _

Mobile App Developer

SCU Frugal Innovation Hub, USA

01/2024 - 06/2024

- Steered the end-to-end development of a bilingual math app assisting Hispanic children overcome language barriers.
- Conducted requirement analysis, designed UI/UX, created prototypes on Figma, and developed the app using Flutter SDK, Dart.
- Planned tasks, estimated efforts, and assigned responsibilities to team members, ensuring efficient workflow and timely delivery.