

Kaushal Marimuthu

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EDUCATION

The University of California at Davis

Davis, CA

B.S. Computer Science and Engineering, B.S Statistics, GPA: 3.96/4.0

Sept 2022 – June 2026

EXPERIENCE

Software Engineer Intern

June 2024 – Aug 2024

Deloitte

Sacramento, CA

- Led transition to a cloud-native architecture for a company with 16M users, supporting 3 client proposals.
- Reduced latency by 40% and TCO by 12% by designing cloud-native solutions using AWS.
- Accelerated processes by 10% with an AI-powered internal tool that automated Excel and Outlook data handling.
- Integrated PostgreSQL and Jakarta Persistence to manage employee data and resolve 5 client tickets.

Undergraduate Researcher

April 2024 – Present

UC Davis Center for Mind and Brain

Davis, CA

- Conducted research using 150+ fMRI brain scans to optimize CNN design for music-stimulated brain modeling.
- Developed a generative music model using transformers, trained on 2000+ songs.
- Improved genre classification accuracy by 15% with CNN models built using Emergent software and Go.

Software Engineer Intern

July 2023 — Sept 2023

Brain Racers (startup)

San Francisco, CA

- Optimized MySQL & Redis databases, improving data access by 25% and reducing queries by 80%.
- Cut data retrieval latency by 10% with 3 REST APIs, boosting frontend development speed by 3x.
- Created 5 reusable modular components in React, including interactive graphs and live game trackers.

Data Analyst Intern

June 2022 — Aug 2022

DigitalMain (startup)

Sunnyvale, CA

- Automated analysis of 15,000+ data points from 6 cybersecurity forums, optimizing data handling by 7x.
- Collaborated on a project blueprint integrating machine learning models for efficient data categorization.

Software Developer & Project Manager

Oct 2023 – Present

CodeLab

Davis, CA

- Built 10+ interactive components and consolidated 3 product iterations into a unified dashboard for BillionMinds.
- Aggregated data from 4 APIs into a MongoDB database, reducing data loading latency by 50%.
- Managed a team for 16 weeks to build video summarizing software using TypeScript, Node.js and Google Gemini.

Software Engineering Director

July 2023 – Dec 2023

Davis Quant Collective

Davis, CA

- Incorporated findings from 5 research papers to streamline stock portfolio manager ML architecture by 25%.
- Led a team to develop a Python trading bot, achieving a 5% average annual ROI on historical and live markets.

PROJECTS

Virtual Tour Guide | React, OpenAI, Docker

July 2023 – Nov 2023

- Developed an AI-powered tour guide in React using Google Maps API and OpenAI Davinci for real-time personalized tourist experiences.
- Integrated MongoDB for user account management and travel location storage, using Express and Node.js for database interactions.

TomatoClassify | Python, Tensorflow, PyTorch, Flask, Numpy

May 2023 – Sep 2023

- Built a CNN model with TensorFlow to classify tomato plant diseases, achieving 93% accuracy on 16,000 images.
- Reimplemented key machine learning models from scratch to deepen understanding of learning algorithms.

TECHNICAL SKILLS

Languages/Frameworks: Java, C++, C, Python, JavaScript, TypeScript, Go, React, Next, MongoDB, Node, HTML, CSS, PHP, MySQL, Swift, Objective-C, Dart, Django, Flask

Tools/Technologies: PyTorch, Tensorflow, Keras, CUDA, OpenAI, Tailwind CSS, Postman, Docker, VS Code, REST APIs, VisionOS, AWS, Algorithmic Programming, Data Analysis, ci/cd, Kubernetes