Advait Arumugam

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Education

University of California, Santa Barbara, *B.S. in Computer Science* Sep 2021 – Mar 2025

Relevant Coursework: Data Structures, Algorithms, Full-stack Development, Operating Systems, Database Systems, Applications Programming, Machine Learning, Networking, Internet of Things, UI/UX, Virtual/Augmented Reality

Technical Skills

Languages: Python, TypeScript, JavaScript, C, C++, Java, Ruby, HTML, CSS, SQL, Assembly, C#, MATLAB

Frameworks: Next.js, React.js, React Native, Node.js, Ruby on Rails, Spring Boot, Flask, FastAPI, Jest, Pytest, Scikit-learn

Software Tools: Git, GitHub, Docker, Kubernetes, Azure DevOps, Heroku, Vercel, AWS, CI/CD, VS Code, Expo, Vim, Figma, Wireshark, Clerk, PostgreSQL, MongoDB, Supabase, Postman, PostHog, Sentry, Cursor, Whisper

Technologies: iOS, Android, RESTful APIs, LLM APIs, Raspberry Pi, Arduino, Meta Quest, Windows, Linux, macOS

Professional Experience

Lyra — YC X25, *Full Stack Engineering Intern* Feb 2025 – Apr 2025 | San Francisco
- Led development of key features for an AI-driven sales platform using **TypeScript** (**Zod**, **Zustand**, **tRPC**), **Next.js**, **Supabase**, **Vercel**, **Twilio**, **Tailwind** and backend services for real-time data sync, authentication, and permissions
- Integrated APIs (**Stripe**, **Zapier**, and **Slack**) to transform sales conversations into actionable tools
- Set up observability and analytics tooling (**PostHog**, **Sentry**) to monitor engagement and inform iteration

Gaea Global Technologies (Synkrato), *Software Development Intern* Jun 2024 – Sep 2024 | Santa Clara
- Refactored **Python-based** Optimus AI engine with **Scikit-learn** and vectorized operations (**Pandas**, **NumPy**) to achieve **18%** faster preprocessing, optimized **MongoDB** query performance, and enhanced security features
- Implemented **Azure DevOps** CI/CD pipelines with **100%** mutation coverage and end-to-end test automation (**Pytest**), reducing release cycles by **15%**
- Engineered scalable components for Vision AI and digital twin logistics optimization projects

MBit Wireless, *Software Engineering Intern — Tools Team* Jun 2021 – Sep 2023 | Irvine
- Boosted **30+** engineers' productivity by **20%** by refactoring the **Java-based** MBit Trace Tool (MTT) for ARM Skylark 500 SoC (1.2GHz), adding better UI/UX, parameter configuration, parsing, filtering, and real-time variable monitoring for LTE/5G and AIoT applications
- Enhanced MTT architecture by integrating **AWS** services including **S3** (trace storage) and **Lambda** (scalable parsing workflows) to create a robust cloud-based analysis pipeline
- Developed full **JUnit** test suite with **95%** coverage, ensuring reliability across both local and cloud components
- Conducted static and mobility testing on Skylark 500 using MTT and Wireshark for data packet analysis and performance verification, leveraging expertise in TCP/IP and data parsing

Projects

Wafflr, *Founder University — Cohort 10* Jan 2025 – present
- Architected and launched a social video app with **TypeScript**, **React Native**, **Expo**, and **Supabase**, enabling weekly synchronized video sharing with **99.9%** upload reliability and **400+** active users
- Implemented features including real-time notifications, video compression, **Clerk** authentication, **PostHog** analytics, **Sentry** monitoring, engagement systems, onboarding, and tutorial, using **Linear** for agile tracking
- Designed UI/UX on **Figma**, created and maintained development changelog and landing page

AI-Powered Kubernetes Query Assistant Oct 2024
- Developed LLM-powered **Python** assistant for **Kubernetes** cluster queries via **Minikube**, utilizing **Flask** and **OpenAI API**

MBit Wireless Website Sep 2024
- Designed **Ruby on Rails** website with **SEO**, deployed on **Heroku** with CI/CD pipelines and **PostgreSQL** integration

Happier Cows Jan 2024 – Mar 2024
- Followed **Agile** methodologies (**Scrum**, **Kanban**) to develop a collaborative simulation game using **React.js**, **Node.js**, **Spring Boot**, and **PostgreSQL**, including **Google OAuth**, automated testing (**Jest**, **Playwright**, **Stryker**, **JUnit 5**, **JaCoCo**), CI/CD pipelines for deployment (**Dokku**), and documentation (**Swagger**, **Javadoc**)

Irvine CubeSat Program, *Senior Member* Sep 2018 – Jun 2021
- Contributed to development and testing of IRVINE01, IRVINE02, IRVINE03, and IRVINE04 nanosatellites
- Leading member of IRVINE04's Design Review presented to JHU Applied Physics Laboratory and NASA JPL