Adithya Iyer

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Education

University of California - Riverside — Riverside, California
Bachelor of Science in Computer Science — *September 2022 – December 2025*
Bachelor of Science in Neuroscience — *September 2022 – December 2025*

GPA: 3.96

Related Courses: Data Structures & Algorithms, Automata & Formal Languages, Operating Systems, Concurrent Programming & Parallel Systems, Machine Learning & Big Data, Edge Computing, Algorithm Engineering

Experience

The Aerospace Corporation — El Segundo, CA
Software Engineering Intern — *June 2025 – Present*

- Built full-stack app to scale HP device warranty lookups by 10x using TypeScript, Express.js, and Puppeteer
- Designed frontend with React, Next.js, and TailwindCSS, enabling data access for non-technical users via Excel
- Streamlined QA by integrating Playwright to automate 11 test cases, reducing manual testing time and effort
- Automated Active Directory OU changes during Windows upgrades for 4,400+ devices using PowerShell

UCR CRESP — Riverside, CA
AI Research Assistant — *April 2024 – June 2025*

- Designed end-to-end Automated Program Repair (APR) system targeting C and Java vulnerabilities using static analysis and LLM-based patching for DARPA's Artificial Intelligence Cyber Challenge (AIxCC)
- Benchmarked APR components and 4 SOTA LLMs to identify configuration trade-offs in patch quality, success rate, and cost, using LiteLLM for unified API access and tracking
- Conducted ablation study on APR pipeline on 143 Linux Kernel bugs to identify 3 key localization techniques

Tissue Spatial Geometrics Lab — Berkeley, CA
Software Engineering Intern — *May 2021 – May 2022*

- Developed Python program to assess the rotational independence of Quadrant Slope Index algorithm
- Leveraged NumPy and MatPlotLib to speed up cell nevi distance calculation and visualization pipeline by 38%
- Parsed and cleaned CSV data from 300+ cell bodies across 8 files by removing null and outlier values with Pandas
- Standardized features through Z-score normalization to prepare data for model input

Projects

CloudPulse | *Python, TensorFlow, Docker, FastAPI, AWS*

- Trained TensorFlow neural networks for real-time health monitoring, reaching 99.59% accuracy on inference
- Optimized model size by 87.2% via quantization and pruning, sustaining 0.5 ms inference latency on edge devices
- Engineered synthetic data generation pipeline simulating 400+ inputs/sec for end-to-end system validation
- Built and deployed FastAPI + WebSocket protocol for low-latency data streaming between edge and fog layers

InteR'planetary | *Python, Flask, React, Three.js* — devpost.com/software/inter-planetary

- Won 3rd place at CutieHack2024 by developing full-stack application to customize planets and assess habitability
- Implemented statistical model and REST API to calculate and serve habitability scores using Python and Flask
- Utilized React, TailwindCSS, and Three.js to build an interactive frontend to visualize generated planets in 3D

NAAMA Website | *React, Next.js, TailwindCSS, Framer Motion* — naama.ucrhighlanders.org

- Developed the official website for UCR NAAMA using Next.js to share club annoucements, calendar, and pictures
- Enhanced UX by implementing responsive layout and animations with TailwindCSS and Framer Motion
- Collaborated in an Agile team of 7+ developers, reviewing and merging 70+ pull requests using GitHub

Technical Skills

Languages: Python, TypeScript, JavaScript, C/C++, Powershell, Bash, SQL
Frameworks & Libraries: TensorFlow, NumPy, Pandas, Matplotlib, React, Next.js, Flask
Developer Tools: Git/Github, Docker, GoogleTest, CMake, Playwright