

# Adithya Iyer

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## EDUCATION

### University of California, Riverside

Bachelor of Science in Computer Science

Bachelor of Science in Neuroscience

Riverside, California

September 2022 - December 2025

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GPA: 3.95

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

## EXPERIENCES

### UCR Information Technology Solutions

Riverside, CA

Configuration Analyst

September 2023 – Present

- Reorganize management hierarchy of 3000+ Windows and Mac devices resulting in 15% increase in team efficiency
- Mitigate **high severity CVEs** across 32% of endpoints by deploying 20+ relevant OS and software patches
- Create and deploy **Powershell** scripts using **Jamf** and **NinjaOne APIs** to automate device management
- Handle customer support tickets involving device setup and configuration through **ServiceNow**
- Write and maintain **technical documentation**, including system workflows and installation guides

### UCR CRESP

Riverside, CA

Artificial Intelligence Researcher

April 2024 – Present

- Participated in DARPA's Artificial Intelligence Cyber Challenge (AIXCC) to detect and remediate vulnerabilities
- Designed and built an end-to-end **Automated Program Repair System** for C and Java programs
- Tested patch validity of 8 **LLM models** across 5 temperatures using Linux kernel bugs to optimize performance

### Tissue Spatial Geometrics Lab

Berkeley, CA

Computational Biology 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

### Fungible, Inc.

Santa Clara, CA

Information Technologies Intern

June 2020 – August 2020

- Reduced IT workload by 20% by racking servers and installing **Linux ISOs** to expand datacenter capacity
- Created **Python** scripts to automate activation of header boards used to validate products for quality assurance
- Configured static IP addresses and network settings to integrate 10+ new servers into existing infrastructure

## PROJECTS

### GenerosiTree | Next.js, Typescript, Firebase, TailwindCSS

[www.generositree.co](http://www.generositree.co)

- Architected a minimum viable product for an image sharing platform to promote sustainability and reforestation
- Collaborated with a teammate to build an interactive front-end with **Next.js** and **Three.js** in 24 hours
- Streamlined support for tree-planting initiatives by facilitating real-time donations using the Digital Humani **API**
- Deployed a scalable user account system using **Firebase Auth** and **Firestore** to manage authentication and data

### InterR'planetary | Python, Flask, React, Three.js

[devpost.com/software/inter-planetary](https://devpost.com/software/inter-planetary)

- Won 3rd place at CutieHack2024 by developing full-stack application to customize planets and assess habitability
- Spearheaded backend implementation of statistical likelihood model with 4 key metrics using **Python** and **Flask**
- Utilized **React**, **TailwindCSS**, and **Three.js** to build an interactive frontend with 3D model of created planets

### SciCaml | OCaml, Dune

[github.com/Pineapple-Soup/scicaml](https://github.com/Pineapple-Soup/scicaml)

- Designed and implemented a machine learning utility library from scratch in **OCaml**
- Applied test driven development with **OUnit2** to plan and validate the functionality of new features
- Implemented 2 regression models using custom matrix and dataset objects with utilities for data manipulation

### Home Automation | Raspberry Pi, ESP8266, Home Assistant

- Planned and constructed **Raspberry Pi** system with Relay HAT to control room fan and desk lamp
- Integrated iOS Shortcuts and Siri via **SSH** for remote system actuation, improving automation and accessibility
- Created entry detection modules using Hall Effect Sensors and **ESP8266 Microcontrollers** for real-time monitoring by utilizing Home Assistant integration to trigger mobile notifications upon activation

## TECHNICAL SKILLS

**Languages:** C/C++, Python, Powershell, Bash, JavaScript, TypeScript, OCaml

**Frameworks & Libraries:** Next.js, React, TailwindCSS, NumPy, Pandas, Matplotlib, Numba, Flask, LiteLLM

**Developer Tools:** Git/Github, GoogleTest, Docker, CMake, OUnit2