Aanand Kainth

SF Bay Area | +1 (408) 480-2845 | aanand@akainth.me

EDUCATION

B.S. Computer Science (GPA 3.93) @ University of California, Santa Cruz (Magna Cum Laude)   Jun 2023

EXPERIENCE

Software Development Engineer Intern @ Amazon Web Services (AWS) CloudWatch RUM   Jun 2023 – Sep 2023
- Prototyped new data plane architecture to support open-source instrumentation in 2 months
  - Authored a retail store demo using Swift in 1 wk to demonstrate added support for mobile and desktop
  - Deployed to AWS service account using CDK for reproducible deployments

Software Development Intern @ Plume Design Inc.   Jun 2021 – Sep 2021
- Developed 12+ REST APIs backed by MongoDB in distributed Node.js microservice with 91% test coverage
- Defined 4 gRPC endpoints and Protobuf schemas for type-safe interactions

Fellow, Facebook AI Research (VISSL) @ Major League Hacking   Feb 2021 – Apr 2021
- Identified and fixed long-standing bug, repairing the performance and consistency of 20+ models
- Implemented square-root LR scaling for ~10% faster convergence for parallel workloads

Fellow, BentoML @ Major League Hacking   Jun 2020 – Sep 2020
- Collaborated with maintainers to refactor the public interface, reducing average size of PRs by ~40%
- Integrated PySpark ML, to support 1k+ users deploying 20+ models quickly and scalably

Software Development Intern @ Plume Design Inc.   Jun 2019 – Sep 2019
- Overhauled operations center charting, reducing load times by 0.6s, saving engineers 10 hrs / month
- Established support to update CORS headers from Zookeeper, avoiding 2-minute global outages

PROJECTS

EyeGuard (Personal project, 2023)   C# / Windows App SDK
- Published a Microsoft Store app with 2k+ users to enforce 20/20/20 recommendation by optometrists

Semi-supervised Learning Image Labeling (Class project, 2023)   Tensorflow / Swin-L
- Leveraged semi-supervised learning to train a model on 50k unlabeled images with a 10 image per class seed
- Won class competition with a 93% accuracy rate, outperforming MS students

Multithreaded HTTP/1.1 Server (Class project, 2022)   C / POSIX Syscalls
- Created a multi-threaded HTTP/1.1 web server capable of 1k RPS and debugged using Valgrind and gdb
- Allowed clients to submit files as large as 16 GB, and managed concurrent writes or stagnant writes

Aerobrakes (Personal project for UCSC Rocket Team, 2021)   OpenRocket / Kotlin / Gradle
- Simulated UCSC aerobrakes in OpenRocket extension to limit rocket to within 12 ft of 1 mile altitude target
- Developed flight path prediction algorithm using gradient descent for linear optimization with 10 ft. accuracy

Ambient (Personal project, 2020)   Gradle / Kotlin
- Developed IntelliJ extension to import Java assignments from Snarf and submit to WebCAT with 900+ downloads

EXTRACURRICULAR ACTIVITIES

President @ UCSC Rocket Team   Oct 2020 - Jun 2023
- Coordinated a team of 29 students to launch $5,500 rocket in 1st successful NASA USLI competition in 5 years
- Engineered and simulated a real-time flight path prediction algorithm with an accuracy of 10 ft with CircuitPython

SKILLS & OTHER

Technologies: Python, HTML/CSS/JS, Node.js, React, Vue, Java, Kotlin, C, Rust, C++, C#, SQL, Android SDK, Swift, Go
Tools: Google Cloud, AWS, Firebase, Git, Gradle, Bash, Linux, PowerShell, Windows, VPC, TCP/IP, DNS, Docker
Extracurricular: President of UCSC Rocket team (Jun 2022- Jun 2023), Vice-president of UCSC Rocket Team (Sept 2021 - Jun 2022), Eagle Scout + Bronze Palm (2022), CruzHacks 2023 Speaker (React, Filtering Algorithms), Top 6 at MenloHacks