

# Aanand Kainth

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## EDUCATION

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

## WORK EXPERIENCE

**Software Development Engineer Intern @ AWS** Jun 2023 – Sep 2023

- Instrumented a retail store using OpenTelemetry to derive real-user-monitoring information as part of a project to expand the customer base for CloudWatch by 100, translating to \$10,000 / month

**Software Development Intern @ Plume Design Inc.** Jun 2021 – Sep 2021

- Developed 12+ REST APIs for Loopback (Node.js) microservice to drive new family-safety features
- Defined 4 gRPC endpoints and the corresponding Protobuf schemas for type-safe invocations between microservices
- Installed 3 new Braze onboarding campaigns to improve setup experience for customers

**Fellow, Facebook AI Research (VSSL) @ Major League Hacking** Feb 2021 – Apr 2021

- Centralized training event system, reducing code churn in pull requests by 33%
- Implemented square-root learning rate scaling to achieve faster convergence for parallel workloads
- Identified and fixed long-standing chained layer expansion bug, reducing affected config sizes by 16 lines

**Fellow, BentoML @ Major League Hacking** Jun 2020 – Sep 2020

- Designed a major public interface refactoring with maintainers, resulting in 40% less code in pull requests
- Authored support for PySpark ML, closing an issue with 7 supporters, opening the service to 1,056+ users

**Software Development Intern @ Plume Design Inc.** Jun 2019 – Sep 2019

- Overhauled network operations center charts, reducing load times by 0.6s, saving the company 10 hrs / month
- Established support to dynamically update CORS headers, avoiding potential 2-minute global outages
- Migrated operations center codebase from AngularJS 1 to Angular 8 for 1 month

## PROJECTS

**Beefystew** Google Cloud / Python / Tensorflow Keras / Vue

- Managed a group of 5 to create a hashtag-centric AI-enforced social media platform
- Optimized to train a new hashtag in 30 seconds on a CPU, with 80% - 95% accuracy from just 50 images

**Semi-supervised Learning Image Labeling** 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

**Concept** React / GoogleScript / Google Natural Language

- Invented a Google Docs add-on to analyze writing, contextually reporting 8+ metrics using NLP

**Tape** Gradle / Kotlin

- Extended Gradle with a plugin to generate type-safe dimensional analysis for unit conversion
- Leveraged in aerobrace simulation software, reducing time to implement by 10%

## TECHNOLOGY SUMMARY

**Languages & Frameworks:** Python, HTML/CSS/JS, Node.js, React, Vue, Java, Kotlin, C, Rust, C++, C#, SQL, Android

**Tools:** Git, Gradle, AWS, Bash scripts, Linux, Windows, NoSQL databases, Valgrind, gdb, Google Cloud

## 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
- Spearheaded team of 7, developing aerobraking system to limit the flight of the rocket with 300 ft. stopping power
- Engineered and simulated a real-time flight path prediction algorithm with an accuracy of 10 ft with CircuitPython