Aditya Mokkapati

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Education

University of California, Santa Cruz September 2025 - June 2026
Computer Science M.S. GPA: 4.0/4.0

University of California, Santa Cruz September 2022 - June 2025
Computer Science B.S. GPA: 3.9/4.0

Awards: Dean's Honors List (7x)
Relevant Coursework: Intro to Data Structures and Analysis of Algorithms, Computer Architecture, Computer Systems Design, Applied Machine Learning, Artificial Intelligence, Networking Security

Experience

Workday, Software Engineer Intern June 2025 - September 2025

- Engineered synthetic traffic tests in Java, Playwright, and JUnit, simulating **1,000+** daily user sessions to enable real-time coverage and early testing.
- Reduced CI/CD pipeline build time by **80% (30 → 5 min)** by integrating synthetic tests into Jenkins and optimized workflows with QA and Infra teams.
- Deployed Grafana dashboards and PagerDuty alerts across **10+** environments, speeding up root-cause analysis and reducing MTTR by **2 hours** per incident.
- Prototyped LLM-based test-failure summarization using the OpenAI API; surfaced accuracy gaps that informed future automation plans.

Workday, Software Engineer Intern June 2024 - September 2024

- Built observability dashboards for the Public Cloud team, ingesting **10,000+** weekly events from **GitHub**, **Jira**, and **PagerDuty** to track DORA and sprint metrics.
- Enabled leadership to cut Jira delivery time by **30%** and boost Terraform deployment frequency by **20%** through metric-driven insights.
- Optimized Docker builds with multi-stage caching, shrinking environment build time **80% (10 → 2 min)** and improving reproducibility across dev and cloud.
- Scaled AWS infrastructure (EC2, RDS, ALB, ASG) via Terraform to handle **3×** expected load with zero downtime during peak testing and dashboard use.

Projects

NES-Style Console Emulator

- Built a C++ 8-bit emulator with separate CPU, memory, GPU, and controller modules; ran custom ROMs at 60 FPS with SDL2 rendering and 95%+ instruction accuracy.
- Shipped cross-platform builds using CMake and FFmpeg, running on macOS, Windows, and Linux with input playback and MP4 debug export.
- Added input recording, replay, and save-state tools, cutting manual test time by 40% and speeding up debugging.

Drought Severity Predictor

- Built an experimental ML pipeline to classify drought severity levels (D0–D3) using historical climate data; explored hybrid models with PyTorch and XGBoost on structured tabular features.
- Implemented class rebalancing with SMOTETomek and hyperparameter tuning techniques (dropout, batch norm, learning rate scheduling); reached up to **82%** accuracy in offline testing.
- Created a basic UI for scenario testing and feature importance visualization to inspect model decisions interactively.

Technical Skills

Languages: Python, C, C++, Java, JavaScript
Developer Tools: Docker, Jenkins, AWS(EC2, RDS, VPC), Terraform, Grafana, Git, Playwright, PyTorch, TensorFlow, React, Pandas, OpenAI API, JUnit, Unix
Certifications: AWS Certified Cloud Practitioner