Adnan Aman

adnan_aman@berkeley.edu | linkedin.com/in/adnan-aman | github.com/plsBoost | adnanaman.com

Education

University of California, Berkeley **Expected Graduation: December 2024**
Bachelor of Arts in Computer Science GPA: 3.7/4.0

Relevant Coursework:
Operating Systems, Machine Learning, Database Systems, Computer Security, Networks, Algorithms, Computer Architecture, Computer Vision, Data Structures, Optimization Models in Engineering, Probability for Data Science

Experience

Software Engineer Intern May 2024 – August 2024
Microsoft (Azure ML) *Redmond, WA*

- Designed and implemented a large-scale distributed tracing infrastructure using Go and Python for ML inference endpoints, reducing system debugging time by 40% and generating annual operational cost savings of $500K
- Developed comprehensive service monitoring capabilities by integrating OpenTelemetry SDK with Envoy proxy configurations, enabling end-to-end visibility and enhanced debugging across distributed microservices
- Created a real-time trace visualization and monitoring dashboard supporting 3M requests per second with custom instrumentation layers, decreasing mean time to resolution by 25% for production incidents
- Implemented automated CI/CD pipelines with reusable deployment templates using Azure DevOps, improving deployment reliability by 30% and standardizing release processes across 15+ microservices

Academic Instructor June 2023 – August 2023
University of California, Berkeley *Berkeley, CA*

- Mentored 200+ students in UC Berkeley's Data Structures course, providing technical guidance in Java
- Conducted weekly office hours and lab sections, helping students debug code and understand core algorithms
- Created supplemental learning materials that improved student project scores by 25% across 4 major assignments

Technical Instructor August 2021 – January 2022
CodePath *Irvine, CA*

- Mentored 35 students in full-stack Android development through code reviews, achieving 95% completion rate
- Led technical workshops on REST APIs and MVC patterns, resulting in 30% improvement in final project scores
- Developed comprehensive Android development guides used by 150+ students across multiple course sections

Projects

Pintos Operating System | *Personal Project* | *200 Hours* | *GitHub* September 2024 – December 2024

- Developed an operating system using C and POSIX APIs by extending a barebones kernel to support userspace processes, multithreading, and efficient memory management, while handling page faults and implementing synchronization primitives
- Implemented strict priority thread scheduling, alongside efficient timer mechanisms and deadlock avoidance strategies, significantly enhancing system robustness, responsiveness, and performance under different workloads
- Designed and integrated a comprehensive file system with path resolution, buffer cache, hierarchical directories, file extensions, and complete path navigation, optimizing file I/O operations and enhancing system functionality

Talking-Oski | *Next.js, React, Tailwind CSS, MongoDB* | *CalHacks 2024* October 2024

- Created campus assistant using Next.js and React, enabling real-time voice interactions for visually impaired
- Designed event tracking system with MongoDB, implementing automated scraping of daily campus activities
- Implemented comprehensive speech processing pipeline integrating text-to-speech and voice recognition capabilities

Activities and Awards

ValleyHacks 2022: Won 2nd place for developing an interactive blockchain visualization system for crypto education

CSM Mentor: Guided 20+ CS students in data structures and algorithms, maintaining 90% satisfaction rate

CalHacks 2024: Developed an AI-powered campus assistant for events and campus info, used by 100+ students

Technical Skills

Languages: Java (5 yrs), Python (4 yrs), C (3 yrs), Go (2 yrs), TypeScript/Javascript (1 yr), SQL, Rust, x86 Assembly
Libraries & Frameworks: React, Next.js, Node.js, Express.js, OpenTelemetry, PyTorch, JUnit
Developer Tools: Git, Docker, AWS, Azure, MongoDB, Linux, Valgrind, GDB, Bash
Machine Learning: PyTorch, Scikit-Learn, OpenCV, NumPy, Pandas, SciPy