Adnan Aman

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Education

University of California, Berkeley **Class of 2025**
Bachelor of Arts in Computer Science GPA: 3.6/4.0

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

Experience

Microsoft May 2024 – August 2024
Software Engineer Intern *Redmond, WA*

- Implemented distributed tracing under Azure OpenAI, enhancing observability for over **2.5 trillion** monthly scoring requests using Go, Python, and Docker
- Integrated tracing capabilities into HTTP listeners using Envoy configurations, enhancing service observability
- Instrumented spans for tracing within Go applications using OpenTelemetry SDK, enabling traceability
- Developed a custom dashboard for visualizing traces and monitoring connected services using React.js, TypeScript, and Fluent UI, improving debugging efficiency for **3M RPS**
- Configured and deployed Datadog tracing agent, facilitating the exporting of traces across distributed systems
- Developed and maintained CI/CD pipelines for testing and deploying services, creating reusable templates to streamline releases and ensure consistency across deployments

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

- Worked as a lab assistant for UC Berkeley's Data Structures course with roughly ∼1600 students
- Assisted students with projects and labs in Java, helping to increase their coding and debugging skills
- Worked in office hours to support students with homework and conceptual misunderstandings
- Guided students to implement and experiment with fundamental algorithms and data structures through various projects and labs

Projects

YelpCamp | *Node.js, Express.js, MongoDB, Bootstrap* March 2024 – May 2024

- Developed a web application for campsite reviews, using Node.js, Express.js, and MongoDB, focusing on user-generated content, security, and data integrity
- Implemented user authentication, admin roles, and a review system in YelpCamp, to enhance application security and user interaction
- Integrated Google Maps API for interactive campsite location features and deployed Google Ads for revenue generation

RookieDB: Resilient Database Recovery System | *Java, ARIES Algorithm* January 2023 – May 2023

- Designed a database recovery system using Java and the ARIES algorithm
- Used logging and checkpoints for system recovery in case of system failures
- Optimized I/O operations utilizing concurrency and query optimization, which led to a 30% reduction in data retrieval latency

CS61KaChow: Optimized 2D Convolutions | *C, SIMD, OpenMP, Open MPI* April 2023 – May 2023

- Optimized 2D convolutions utilizing SIMD vector instructions, achieving a **8.05x** speedup and significantly improving image processing times
- Enhanced task parallelism using OpenMP, resulting in efficient multi-threaded operations and reduced processing overhead
- Coordinated parallel processing tasks utilizing Open MPI's manager-worker architecture, leading to a **5.30x** speedup in convolution operations across large datasets

Technical Skills

Languages: Java, Python, C, Golang, JavaScript, TypeScript, HTML, CSS, SQL, MQL
Frameworks and Libraries: React.js, Express.js, Bootstrap, Node.js, JUnit, OpenTelemetry
Developer Tools: Git, Vim, Linux, MongoDB, LaTeX, Docker, Bash, Azure