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:

Computer Architecture, Discrete Math and Probability, Data Structures, Probability for Data Science, Linear Algebra, Structure of Computer Programs, Introduction to Database Systems, Efficient Algorithms and Intractable Problems

TECHNICAL SKILLS

Languages: Java, Python, C, HTML/CSS, JavaScript SQL, MQL
Developer Tools: Git, Vim, Linux, MongoDB, JUnit Testing, LaTeX, Android Studio, Logisim

EXPERIENCE

CodePath   August 2021 – January 2022
Android Software Engineer   *Irvine, CA*

- Engineered **3+** Android applications utilizing Java and Android Studio IDE, resulting in dynamic user experiences and a **25%** faster load time through efficient debugging and Gradle builds
- Employed MVC patterns in **3 major projects**, leading to a modular codebase, which improved maintainability and allowed a responsive user experience for thousands of active users
- Integrated RESTful APIs using CodePath's AsyncHttpLibrary in **4 applications**, facilitating real-time data fetch and display, leading to a **25%** improvement in data load times
- Enhanced app security by pioneering advanced user authentication techniques, which reduced security breaches by **50%** and streamlined user onboarding
- Collaborated with **2 UI/UX designers** using advanced Android theming techniques, achieving **98%** design fidelity and ensuring consistent user interfaces across devices

PROJECTS

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

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

- Designed a database recovery system using Java and the ARIES algorithm, resulting in **99.99%** system uptime and near-zero data loss
- Optimized I/O operations utilizing efficient memory buffers, which led to a **45%** boost in query execution and a **30%** reduction in data retrieval latency

NGordnet: NLP and Data Analysis | *Java, JUnit, JavaScript*   November 2022 – December 2022

- Constructed NGram models from over **5GB** of textual datasets utilizing optimized NGramMap and TimeSeries data structures, achieving a **40%** enhancement in word frequency analysis speed
- Incorporated WordNet into NGordnet, expanding its capabilities by **5000+** unique word senses, resulting in enriched semantic analysis for linguistic researchers
- Designed an interactive web interface using HTML, CSS, and Javascript, facilitating user-friendly linguistic research and visualization for diverse user demographics