Jackson Newman

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Work Experience

Visa — Foster City, CA *Software Engineer*   April 2025 – Present
- Designed and implemented the full stack for an audit viewing feature, reducing audit time by 90%.
- Developed 20+ TypeScript UI pages for displaying and submitting database-backed data.
- Built 10+ Java REST APIs to retrieve, edit, and persist organization and user data in Oracle.
- Developed two Python FastAPI services to trigger and monitor AI workflows using PostgreSQL.
- Wrote SQL scripts to manage permissions and workflow configurations across Oracle and PostgreSQL.
- Created six domain-specific AI agents through prompt engineering, improving workflow accuracy by 30%.
- Prepared and refined datasets to enable AI workflows and ensure accurate performance evaluation.
- Co-led an AI image analysis project automating branding checks, reducing turnaround time by 60%.
- Redesigned LangGraph architecture for batched LLM inference, increasing system performance by 80%.
- Engineered LLM workflows and optimized prompt design, boosting system performance and accuracy by 40%.

AMD — San Jose, CA *Backend Software Engineer Intern*   June 2023 – September 2023
- Accelerated Vivado constraint processing by 50% by implementing optimized C++ pattern matching.
- Reduced total application memory usage by 2% by refactoring to use the Tessil C++ hash map library.
- Developed unit test benchmarks for pattern matching performance across 30 projects.
- Created and automated Vivado memory and encryption tests, decreasing testing time by 50%.
- Automated security key upgrades across 10+ repositories, reducing maintenance time by 80%.

Shellie.us — San Francisco, CA *Software Engineer Intern*   June 2022 – September 2022
- Expanded NoSQL database schema with six new fields to manage exhibit contact data.
- Developed and integrated four REST APIs enabling editing, saving, and deletion across 40+ exhibits.
- Built six reusable React components for web page editing, reducing new feature development time by 20%.

Projects

Historical Stock Information Visualization Website github.com/JNewman-cell/StockProjects
- Developed a Flask-based REST API with six endpoints for real-time stock data retrieval.
- Implemented a custom Trie data structure enabling prefix matching across 6,000+ stock tickers.
- Built a GitHub Actions testing pipeline validating 100% of autocomplete search accuracy.
- Reduced stock data retrieval latency by 80% through optimized API design and local database storage.
- Developed a custom caching system that reduced CI workflow execution time by up to 60%.

Education

University of California, Santa Barbara — Santa Barbara, CA Bachelor of Science in Computer
Engineering   September 2020 – June 2024
GPA: 3.7
Relevant Coursework: Data Structures, Algorithms, Operating Systems, Machine Learning, Artificial Intelligence

Technical Skills

Programming Languages: C, C++, Java, Python, SQL
Frameworks: FastAPI, Spring Boot, JPA,
Databases: PostgreSQL, Oracle, NoSQL
Developer Tools: Git, Docker, Linux, AWS, GCP, GitHub Actions, Jenkins, Firebase, Redis
Concepts: REST APIs, CI/CD, Microservices, Unit Testing, Distributed Systems