

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