Jackson Newman

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Work Experience

Visa — Foster City, CA *Software Engineer* April 2025 – October 2025

- Designed and implemented a backend feature for audit viewing, reducing audit time by 90%.
- Co-led an AI image analysis project automating branding reviews, reducing turnaround time by 60%.
- Implemented 10+ Java REST APIs to retrieve, edit, and persist organization and user data.
- Developed 2 Python APIs to trigger and monitor AI agent workflows and display responsive progress.
- Redesigned LangGraph architecture for batched LLM inference, increasing system performance by 80%.

AMD — San Jose, CA *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 600MB by refactoring to use the Tessil C++ hash map library.
- Developed and automated unit test benchmarks for pattern matching performance testing 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

- Extended NoSQL database schema with 10 new fields to support scalable exhibit contact data management.
- Designed, developed, and deployed 6 RESTful APIs enabling full CRUD operations across 40+ exhibits.
- Integrated and tested backend services with the frontend, ensuring reliable end-to-end functionality.

Projects

Historical Stock Information Visualization Website github.com/JNewman-cell/StockProjects

- Built a high-performance Java backend to expose 5+ RESTful APIs for stock data retrieval and search.
- Devloped and optimized a SQL-based ticker/company name auto-complete API, cutting latency by 60%.
- Engineered an 8-field, filterable, sortable ticker summary API with Querydsl and DB design.
- Integrated multi-tier caching with JPA and Redis to serve frequent requests with 60% less latency.
- Configured and maintained a 4+ CI/CD workflows using GitHub Actions to collect, store, and update tables.

AI Stock Price Action Explanation Agent github.com/JNewman-cell/StockInformationWebsiteAIBackend

- Built a Python backend to expose 2 authenticated APIs for LLM stock news analysis and progress using state.
- Reduced LangGraph execution time by 50%, using intelligent async batching and saving of LLM requests.
- Designed and implemented an efficient ETL pipeline to ingest, normalize, and persist news and market data.

Open Source Contributions github.com/JNewman-cell/yahooquery
github.com/JNewman-cell/Improved-US-Stock-Symbols github.com/JNewman-cell/sec-company-lookup

- Enhanced YahooQuery Python package by fixing 15+ API error structures and adding 3 API endpoints.
- Enhanced NASDAQ stock screener by resolving 3 critical bugs, ensuring accurate and complete stock datasets.
- Developed Python package for batched, cached company CIK lookups via SEC API, reducing lookup time 60%.

Education

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

Technical Skills

Programming Languages: C, C++, Java, Python, SQL, JavaScript, Typescript, JSON, YAML, Bash
Frameworks: FastAPI, Spring Boot, JPA, Express.js, JUnit, Node.js, LangChain, LangGraph
Databases: PostgreSQL, Oracle DB, Firebase, Redis
Developer Tools: Git, Docker, Linux, AWS, GCP, GitHub Actions, Jenkins, Maven
Concepts: REST APIs, CI/CD, Microservices, Unit Testing, Distributed Systems, Performance Optimization