

# Jackson Newman

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## Work Experience

<b>Visa</b> — Foster City, CA <i>Software Engineer</i>	April 2025 – October 2025
• Designed and implemented a backend feature for audit viewing, reducing audit time by 90%.	
• Co-led an AI image analysis MVP 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%.	
<b>AMD</b> — San Jose, CA <i>Software Engineer Intern</i>	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%.	
<b>Shellie.us</b> — San Francisco, CA <i>Software Engineer Intern</i>	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

<b>Historical Stock Information Visualization Website</b> <a href="https://github.com/JNewman-cell/StockProjects">github.com/JNewman-cell/StockProjects</a>	
• Built a high-performance Java backend to expose 5+ RESTful APIs for stock data retrieval and search.	
• Developed 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.	
<b>AI Stock Price Action Explanation Agent</b> <a href="https://github.com/JNewman-cell/StockInformationWebsiteAIBackend">github.com/JNewman-cell/StockInformationWebsiteAIBackend</a>	
• 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.	
<b>Open Source Contributions</b> <a href="https://github.com/JNewman-cell/yahooquery">github.com/JNewman-cell/yahooquery</a> <a href="https://github.com/JNewman-cell/Improved-US-Stock-Symbols">github.com/JNewman-cell/Improved-US-Stock-Symbols</a> <a href="https://github.com/JNewman-cell/sec-company-lookup">github.com/JNewman-cell/sec-company-lookup</a>	
• 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

<b>University of California Santa Barbara</b> — 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

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