

# JACKSON NEWMAN

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## WORK EXPERIENCE

### Visa

Software Engineer, Java, JPA, Typescript, Python, SQL

Foster City, CA

April 2025 - Present

- Designed and implemented the full stack for an audit viewing feature, cutting audit time by 90%.
- Developed 20+ typescript UI pages for sending and displaying information from DB.
- Built 10+ Java APIs to retrieve, edit, and save organization and user data in the Oracle database.
- Developed 2 Python FastAPI services to fetch and start AI workflows from a PostgreSQL database.
- Developed SQL scripts to manage permissions and workflow configs in Oracle and PostgreSQL databases.
- Created six domain-specific AI agents via prompt engineering, improving workflow accuracy by 30%.
- Prepared and refined datasets to enable AI workflows and ensure accurate performance evaluation.
- Co-led AI image analysis project automating branding checks, cutting turnaround by 60%.
- Redesigned LangGraph architecture to handle batched execution for LLM inference, increasing performance by 80%.
- LLM workflows and optimized prompt design, boosting system performance/accuracy by 40%.

### AMD

San Jose, CA

Backend Software Engineer Intern, C++, Python

June 2023 - September 2023

- Accelerated Vivado constraint processing by 50% through implementing new C++ pattern matching.
- Reduced total application memory usage by 2% by refactoring code to use Tessil library C++ hash map.
- Developed unit test benchmark 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, decreasing time spent on upkeep of 10+ repos by 80%.

### Shellie.us

San Francisco, CA

Software Engineer Intern, React, JavaScript, NoSQL, JSON

June 2022 - September 2022

- Expanded NoSQL database schema with 6 new fields to efficiently store and manage exhibit contact data.
- Developed and integrated 4 RESTful APIs enabling seamless editing, saving, and deletion of data across 40+ exhibits.
- Engineered 6 reusable React components for web page editing, cutting new feature development time by 20%.

## PROJECTS

### Historical Stock Information Visualization Website | Flask, Python, Javascript, SQL, CI/CD, GitHub Actions, REST API

- Developed a Flask-based REST API with 6+ endpoints for database retrieval, enabling real-time data.
- Created a custom Trie data structure with 6000+ ticker prefix matching and market cap-based ranking.
- Implemented GitHub Actions testing pipeline for ticker search, validating 100% of autocomplete accuracy.
- Improved stock info retrieval time by 80% through optimized API design and local database storage.
- Developed a custom caching system that cut GitHub Actions workflow time by up to 60%.

## EDUCATION

### University of California Santa Barbara

Santa Barbara, CA

Bachelor of Science in Computer Engineering

September 2020 - June 2024

### 3.7 GPA, Dean's Honors, Relevant Coursework:

Data Structures, Algorithms, Operating Systems, Machine Learning, AI, Web Development

## TECHNICAL SKILLS

**Programming Languages:** C/C++, Java, Python, SQL, JSON

**Frameworks:** FastAPI, Spring Boot

**Developer Tools:** Git, Docker, GCP, AWS, GitHub, Firebase, GitHub Actions Jenkins