Jackson Newman

Redwood City, CA, 94065 | 650-649-8204 | jpnewman167@gmail.com | linkedin.com/in/jacknewman |
https://github.com/JNewman-cell/ | jacksonnewman.netlify.app/

Work Experience

Visa **Foster City, CA**
Software Engineer, Java, JPA, Typescript, Python, SQL 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