Jackson Newman

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Work Experience

Visa **Foster City, CA**
Software Engineer, Java, Typescript, Python, SQL April 2025 - July 2025

- Fully designed and developed the full stack for an audit viewing feature, reducing audit time by 90%.
- Orchestrated cross-team efforts to deliver the auditing feature on time, adapting to multiple redesigns.
- Developed new permission using Oracle DB, improving assignment workflows by 20%.
- Designed a RAG pipeline that boosted AI tool accuracy by 30% through similarity checks on past examples.
- Created specialized agents that improved chatbot accuracy by 10% by enforcing key UI guidelines.

AMD **San Jose, CA**
Software Engineer Intern, C++, Python June 2023 - September 2023

- Accelerated Vivado constraint processing by 50% through a new C++ pattern matching function.
- Developed unit tests achieving 100% coverage to ensure Wildcard Matching performance and accuracy.
- Reduced Vivado memory usage by 2% by refactoring code to adopt Tessil C++ Hash map package.
- Automated memory, encryption tests, and key upgrades with Python, halving testing time.

Shellie.us **San Francisco, CA**
Software Engineer Intern, React, JavaScript June 2022 - September 2022

- Implemented REST API integrations to edit and save exhibit data in a NoSQL backend.
- Created reusable React components, boosting maintainability and cutting development time by 30%.
- Leveraged React and Redux for state management, improving data consistency and reducing errors 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%.

REST API implementation and Database Management | *Java, Javascript, React, PostgreSQL, Spring Boot, Maven, Swagger,*

- Developed CRUD operations in a Java backend for PostgreSQL database, deploying 6 key functions.
- Reduced course search query volume by 60% by implementing search by instructor SQL query.
- Configured Maven backend unit and mutation testing into CI/CD workflow, ensuring 100% uptime.
- Created a comprehensive testing suite to cover 100% of query functionality, including error handling.

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, Embedded Systems, Web Development

Technical Skills

Programming Languages: C/C++, Java, Python, PostgreSQL, SQL, SQLite, JavaScript, HTML, CSS, JSON, YAML
Frameworks: React, Node.js, Flask, Bootstrap, Material-UI, Storybook, Spring Boot
Developer Tools: Git, Docker, Jira, Google Cloud Platform AWS, GitHub, Confluence, Perforce, NPM, Firebase, GitHub Actions, MongoDB, Jenkins
Libraries: pandas, NumPy, TensorFlow, PyTorch, Keras, Seaborn, matplotlib