

JACKSON NEWMAN

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WORK EXPERIENCE

Visa

Foster City, CA

Software Engineer, Java, Typescript, Python, SQL

April 2025 - September 2025

- Designed and implemented the full stack for an audit viewing feature, reducing audit time by 90%.
- Led cross-team collaboration to deliver the auditing feature on schedule, successfully adapting to multiple redesigns.
- Developed SQL scripts to manage permissions and workflow configs in Oracle and PostgreSQL databases.
- Architected a RAG pipeline for image categorization with an AI agent, increasing workflow accuracy by 20%.
- Created six domain-specific AI agents via prompt engineering, improving workflow accuracy by 30%.
- Implemented performance monitoring for AI agents using LangSmith to track and optimize prompt and model effectiveness.
- Prepared and refined datasets to enable AI workflows and ensure accurate performance evaluation.

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