

JACKSON NEWMAN

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WORK EXPERIENCE

AMD	San Jose, CA
Software Engineer Intern, Internal Development Tooling	June 2023 - September 2023
<ul style="list-style-type: none">Accelerated Vivado constraint processing by 50% with a new C++ pattern matching function.Developed unit tests achieving 100% coverage to ensure performance and accuracy for Wildcard Matching.Reduced Vivado memory usage by 2% by refactoring code to utilize Tessil C++ Hash map package.Automated memory, encryption tests, and key upgrades using Python, cutting testing time by 50%.	
Shellie.us	San Francisco, CA
Full Stack Software Engineer Intern, MERN Stack	June 2022 - September 2022
<ul style="list-style-type: none">Developed a React-based hierarchical UI with dynamic modals and edit functionality for exhibits.Created REST API integrations for editing and saving exhibit data in NoSQL backend database.Created reusable React components, improving maintainability and reducing development time by 30%.Used React and Redux for state management, enhancing data consistency and reducing errors by 20%.	

PROJECTS

Collaborative Full Stack Website <i>Java, Javascript, SQL, Maven, Jest, Git, CI/CD, Jenkins, RESTful API</i>	
<ul style="list-style-type: none">Collaborated in an Agile team to deploy 7 front-end and back-end features in a legacy codebase.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 filters.Implemented local storage for user form metadata, reducing course search time by 30%.	
Historical Stock Information Visualization Website <i>Flask, Javascript, SQLite, CSS, Git, CI/CD, GitHub Actions, REST API</i>	
<ul style="list-style-type: none">Developed a Flask-based REST API with 6+ endpoints for database retrieval, enabling real-time data.Enhanced initial front-end load by prerendering charts, reducing subsequent render times by 40%.Designed a custom Trie structure indexing 6000+ stocks by market cap for efficient search results.Improved stock info retrieval time by 80% through optimized API design and local database storage.	
Website for Daily Commute Information <i>React, Javascript, CSS, Bootstrap, Google Auth, GCP, Firebase, Git</i>	
<ul style="list-style-type: none">Created 3 CRUD APIs for user commute information, including time, address, and destination.Configured Firebase for 1000+ users for secure user authentication and database storage.Utilized GCP Functions and Google Maps API for scheduled email sending and fastest route info.Designed and styled interactive interfaces using CSS, increasing usability and readability by 20%.	
AI Model Demonstration Website <i>Flask, AWS, GCP, LLM, REST API</i>	
<ul style="list-style-type: none">Configured and deployed 3 AWS EC2 Linux VMs for website hosting and development and AI hosting.Deployed an end-to-end Flask web app with Nginx to showcase OpenAI-like LLM inference via HTTP.Developed a Flask API server capable of handling hundreds of image generation requests per second.	

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, AI, Machine Learning, Full Stack Web Development, UI/UX Design	

TECHNICAL SKILLS

Programming Languages: C++, Java, Python, C, 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, Confluence, Perforce, NPM, Firebase, GitHub Actions, MongoDB, Jenkins, Kubernetes
Libraries: pandas, NumPy, TensorFlow, PyTorch, Keras, Seaborn, matplotlib