Samuel Ou

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TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Java, SQL, HTML, CSS
Frameworks and Libraries: React, NextJS, Django, Flask, Mongoose, Node, Express, Tailwind
Databases and Developer Tools: AWS, PostgreSQL, MongoDB, Vercel, Git

EXPERIENCE

Headstarter AI   Jul 2024 – Sep 2024
Software Engineering Fellow   *Remote*
- Built and deployed several SaaS products for 100+ users through Vercel supported by Llama 3.1 LLM via the Groq API and integrated paywalls through the Stripe API
- Worked in teams of three to develop an interactive customer support agent using Next.js and integrated a custom RAG pipeline using OpenAI and Pinecone
- Practiced agile methodologies with weekly sprints and incorporated CI/CD practices for iterative deployment

PROJECTS

AceIt | *TypeScript, NextJS, Supabase, PostgreSQL, OpenAI*
- Developed a study tool to generate customized AI-driven exams and flashcards for 70+ users
- Integrated a feedback loop, allowing users to submit suggestions and issues directly, increasing user-driven updates
- Designed robust calendar component with priority tracking, improving schedule organization
- Utilized Shadcn UI to create lightweight and responsive components, significantly reducing build times

Amazon Rainforest Guide | *JavaScript, NextJS, Python, Pinecone, Jupyter, OpenAI*
- Developed an interactive educational web application to win BITS 2024 True Nature Waypoint Contest
- Implemented OpenAI embeddings with Pinecone, ensuring consistent and relevant responses
- Utilized Pinecone for faster retrieval of relevant information, avoiding unnecessary OpenAI queries
- Integrated scroll-triggered animations, improving content visibility and browser experience

CashTrack | *TypeScript, NextJS, NodeJS, ExpressJS, MongoDB*
- Developed a cost-sharing platform that allows users to track expenses, split bills, and settle debts within groups
- Utilized React Context to manage global state, allowing for seamless real-time updates to improve user experience
- Designed a robust accordion component viewable by involved members, enabling multi user accessibility
- Integrated a cost distribution system to allocate individual expenses evenly and percentage-based

MySafety | *TypeScript, NextJS, Firebase, RapidAPI*
- Developed a community safety app for Headstarter hackathon to enhance neighborhood security for 50+ users
- Integrated data pagination to address performance issues, reducing load time by up to 4 seconds
- Built a dynamic criminal offender search interface using React hooks, optimizing live data fetching
- Implemented custom form validation, providing immediate feedback to prevent invalid submissions

E-Commerce | *TypeScript, NextJS, Supabase, PostgreSQL, Stripe, AWS*
- Worked directly with the founder and design team of a private startup to build and improve key features
- Implemented referral-based signups and custom email verification, streamlining the user onboarding process
- Developed admin-specific access controls, automating workflow sales, inventory, and customer support
- Leveraged serverless architecture with AWS Amplify, decreasing operational costs by $10/month

SteelStance | *JavaScript, React, Python, Flask, SQLite, SQL Alchemy*
- Developed a fitness platform that enables users to share personal gym records, integrated with mock gym services
- Leveraged RESTful APIs to accelerate development of core features, prioritizing simplicity for quick integration
- Applied OOP principles by abstracting key methods, improving code reusability within classes and resources
- Implemented custom sorting algorithm of records in table components, enhancing data visualization

EDUCATION

Flatiron School   Manhattan, NY
Software Engineering Bootcamp   *2023*
Stony Brook University   Stony Brook, NY
Bachelor of Science in Biology   *2023*