

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
- Leveraged schema flexibility in MongoDB to handle complex relationships and nested documents

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
- Created RESTful API endpoints for managing fitness records and program enrollments, enabling full CRUD
- 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

Software Engineering Bootcamp

Manhattan, NY

2023

Stony Brook University

Bachelor of Science in Biology

Stony Brook, NY

2023