Samuel Ou

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TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Java, SQL
Development Tools: React, NextJS, Django, Flask, Mongoose, Node, Express, Tailwind, HTML, CSS
Other: AWS, PostgreSQL, MongoDB, Vercel, Git

EXPERIENCE

Headstarter AI   Jul 2024 – Sep 2024
Software Engineering Fellow   *Remote*
- Built several AI-driven SaaS products deployed through Vercel achieving 150+ users
- Developed AceIt using GPT-4 via OpenAI API; Integrated a paywall and custom pricing plans via Stripe API
- Collaborated with 2 fellows to develop MySafety using Llama 3.1 LLM via Groq API
- Practiced agile methodologies with weekly sprints and incorporated CI/CD practices for iterative deployment

Freelance Developer   Feb 2024 – Present
- Collaborated directly with founder and design team of private startup to build and improve key features
- Led full development lifecycle, building an automated system for customer orders and inventory workflows
- Implemented referral-based signups and custom email verification, streamlining the user onboarding process
- Utilized PostgreSQL triggers to complement Supabase's row-level security, ensuring finer control over user access
- Leveraged serverless architecture with AWS Amplify, decreasing operational costs by $10/month

PROJECTS

AceIt | *TypeScript, NextJS, Supabase, PostgreSQL, OpenAI*
- Developed a study tool to generate customized AI-driven exams and flashcards achieving 100+ users
- Integrated a feedback loop for user input, iterating on feedback to implement suggestions and bug fixes
- Designed custom redirection flow for authenticated users, protecting acesss to private endpoints
- Implemented process for parsing AI-generated exam data, ensuring accurate formatting and seamless integration

MySafety | *TypeScript, NextJS, Firebase, Groq*
- Developed a community safety app to enhance neighborhood security collecting 50+ users
- Built a coordinate conversion and geocoding system with Groq API, improving location-based traffic data
- Designed a criminal offender search interface that compiles regional data, streamlining the search process
- Implemented data pagination to address performance issues, reducing load time by up to 4 seconds

Amazon Rainforest Guide | *JavaScript, NextJS, Python, Pinecone, Jupyter, OpenAI*
- Developed an interactive educational web application to win BITS 2024 True Nature Waypoint Contest
- Integrated text vectorization with Pinecone to optimize data retrieval speed, reducing AI response time
- Utilized Pinecone for consistent retrieval of accurate 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
- Designed a robust accordion component viewable by involved members, enabling multi user accessibility
- Leveraged NodeJS backend to create dynamic endpoints for unique group management, improving user experience
- Utilized React Context to manage global state, allowing for seamless real-time updates

SteelStance | *JavaScript, React, Python, Flask, SQLite, SQL Alchemy*
- Developed a fitness platform to replicate a gym web app with workout programs and personal lift records
- Built end-to-end features for managing account and records, allowing users to personalize their profile
- Utilized SQLite for lightweight data storage and lowered processing time, reducing app latency
- 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   *May 2023*