

Brian Shao

Greater NY Area

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EDUCATION

Stony Brook University

August 2021 - May 2024

Bachelor of Science in Computer Science

Stony Brook, NY

Relevant Coursework: Data Structures & Algorithms, Software Engineering, Object-Oriented Programming

SKILLS

Languages: JavaScript (3 yr), Python (2 yr), Java (2 yr), C/C++ (1 yr), SQL (1 yr), TypeScript (< 1 yr), PHP (< 1 yr), R (< 1 yr), MIPS (< 1 yr)

Technologies/Frameworks: AWS, Google Cloud Platform, LangChain, Agile Methodologies (Scrum), React, Next.js, MongoDB, PostgreSQL, Supabase, Firebase, Postman, Axios, Fetch, Mapnik, PyMongo, Linux CLI, API (Maps, REST, OpenAI), Node.js, Express, CI/CD

EXPERIENCE

Software Engineering Fellow

January 2024 - Present

- Led a team of 3-7 to launch and scale 5 AI-driven applications within 5 weeks using React, Next.js, Firebase, Pinecone, and OpenAI, adhering to agile principles and incorporating CI/CD pipelines, attracting over 400 users
- Built a customer support service, integrating a RAG pipeline using OpenAI and Pinecone for knowledge responses
- Led the deployment of a SaaS flashcard generator using fine-tuned GPT-4o mini, integrating Stripe API for payments
- Attended in-person events to connect with engineers, founders, and industry experts from companies like Google, Y Combinator, and Amazon

Software Engineering Research Fellow

September 2023 - May 2024

- Engineered and optimized lab setups for bi-weekly meetings, ensuring seamless operation of technical demonstrations
- Configured SSH environments for remote access, integrating Bash to enhance workflow efficiency by 20%
- Leveraged Python and Bitcoin libraries to process over 618 million transactions, contributing to blockchain research

PROJECTS

FlashCardify | *Typescript, Fetch, Next.js, Supabase, OpenAI, RAG*

August 2024

- Collaborated with and led a team of 6 others to design, implement, and deploy continuous updates to the application using a CI/CD process with daily coding, bug fixing, and nightly production deployments
- Spearheaded an innovative educational application centered around helping students learn more effectively using AI
- Engineered backend integration with Supabase, optimizing complex database operations through the strategic use of triggers, indexes, and functions, which resulted in a 10% increase in query speeds and overall system performance
- Architected environment-based configuration for efficient deployment of development and production environments in a Next.js application, decreasing downtime by 96.67% (from 10 minutes to 20 seconds) by enabling live updates

StockSense | *Typescript, AWS Rekognition, Firebase, Next.js*

July 2024

- Created an inventory application that allows users to view and manage items inputted easily
- Revamped back end with Firebase Auth and Firestore, allowing real-time updates, and simplifying integration by 20%
- Transitioned from Auth.js and Postgres, making the development process more streamlined and scalable
- Integrated AWS Rekognition to accurately identify 1,000+ user-submitted images, enhancing recognition capabilities

CloudMaps | *Javascript, Axios, OSRM, PostgreSQL, MongoDB, Mapnik, Docker, Ansible*

February 2024

- Developed a high-availability map service efficiently handling over 1,600 RPS, ensuring robust performance
- Automated multiserver deployment with Ansible, enhancing efficiency and cutting provisioning time by 30%
- Wrote and optimized SQL queries for searching locations, roads, and buildings, improving search speed by 20%
- Designed a comprehensive U.S. OpenStreetMap index, processing geographic data including 185 million nodes, 20 million ways, and 203 thousand relations, enabling highly scalable and precise routing solutions across regions

MindScribe | *MERN, Javascript, PageFlip, Redux, OpenAI, Axios*

February 2024

- Developed a MERN stack application, enabling a supportive platform for individuals with mental health concerns
- Implemented an interactive journal with react-page-flip, enhancing UX with customizable cover themes
- Integrated Redux for highly efficient state management and seamless communication across components
- Used Axios and integrated GPT-4 API to generate personalized emotional feedback for user journal entries