

# Samuel Ou

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## TECHNICAL SKILLS

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**Languages:** JavaScript, TypeScript, Python, Java, SQL, HTML, CSS

**Frameworks and Libraries:** React, NextJS, Django, Flask, Mongoose, SQL Alchemy, Node, Express, Tailwind

**Databases and Developer Tools:** AWS, PostgreSQL, MongoDB, Git, JUnit

## EXPERIENCE

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### Software Engineering Fellow

Jul 2024 – Present

*Headstarter AI*

*Remote*

- Built 5+ AI apps using NextJS, OpenAI, Pinecone, StripeAPI with 98% model accuracy, verified by 1000+ users
- Led the development of AI-powered websites from design to deployment using MVC design pattern
- Coached by Amazon, Bloomberg, and Capital One engineers on Agile, CI/CD, Git, and microservice patterns

## PROJECTS

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### E-Commerce | *TypeScript, React, AWS, DynamoDB*

Jan 2024 – Present

- Utilized AWS Cognito for secure user authentication and DynamoDB for scalable database management
- Implemented responsive web design to provide seamless user experience across all screen sizes
- Improved scalability and reduced operational costs through serverless computing with AWS Lambda
- Conducted end-to-end testing with AWS Appsync to secure payment gateways and protect user data

### CashTrack | *TypeScript, React, NodeJS, ExpressJS, MongoDB*

Nov 2023 – Jan 2024

- Created an intuitive dashboard for tracking expenses between users, improving debt and credit visibility
- Reduced data retrieval time and app performance by 40% by designing optimized schema
- Implemented login with secure authentication and session management with Express-Session
- Leveraged schema flexibility in MongoDB to handle complex relationships and nested documents

### SteelStance | *React, NextJS, Python, Flask, SQLite, SQL Alchemy*

Oct 2023 – Nov 2023

- Designed and implemented RESTful APIs using Flask to handle user authentication and record management
- Ensured data integrity by validating relationships and constraints between users and records
- Improved performance by implementing custom sorting algorithm of records in table components
- Optimized queries with SQL Alchemy, leveraging in-memory storage for increased speed

### Auto Service | *React, NextJS, Python, Flask, SQLite, SQL Alchemy*

Sep 2023 – Oct 2023

- Refactored table components by reducing clutter by 30% and using semantic HTML elements
- Created unit and integration tests to prevent conflicting user appointments and market bids
- Styled reusable components using Tailwind, adhering to ADA compliance
- Led code reviews and standups, fostering collaboration and improving code quality

### Reddit Clone | *JavaScript, React, Reddit API*

Jul 2023 - Aug 2023

- Developed a dynamic voting system to promote user engagement and provide real-time feedback
- Implemented custom quick sort for simultaneous UI updates and sorting posts by time and popularity
- Designed a submission form with custom form validation to allow users to share new content

## LEADERSHIP

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### Undergraduate TA | *Statistics, Chemistry*

Jan 2021 - May 2023

- Provided one-on-one guidance and academic support to students, helping students gain a better understanding of concepts on assignments and exams
- Provided frequent feedback and fostered open communication with students

## EDUCATION

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### Flatiron School

*Software Engineering Bootcamp*

Manhattan, NY

2023

### Stony Brook University

*Bachelor of Science in Biology*

Stony Brook, NY

2023