

# David Lin

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## EDUCATION

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### Stony Brook University

May 2024

*Bachelor of Science in Computer Science*

**Relevant Coursework:** Object-Oriented Programming, Data Structures, Software Development, Computer Networks, API Documentation, Algorithms, Machine Learning, Database Systems, Web Development, Software Engineering

**Languages/Frameworks:** Java, Python, Javascript, C, HTML/CSS, SQL, React, Spring, Next.js, Node.js, Pandas

**Developer Tools:** AWS, Git, MySQL, MongoDB, Firebase, VS Code, Figma, JIRA, IntelliJ IDEA, GitLab

## EXPERIENCE

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### Software Engineer Fellow

Jun 2024 - Present

*Headstarter*

*New York, NY*

- Directed the development of 5+ AI applications and APIs using NextJS, OpenAI, StripeAPI, and ClerkAPI
- Led the design and deployment of various projects, guiding a team of over 4 engineering fellows, and effectively leveraging MVC design patterns to deliver structured and scalable applications
- Achieved a 98% accuracy rate and successfully accumulated a user base exceeding 1,000 individuals

### Systems Teaching Assistant

Feb 2023 – May 2023

*Stony Brook University*

*Stony Brook, NY*

- Taught complex concepts of system design principles in C to 30 software engineer students on a weekly basis
- Delivered lectures and facilitated discussions on system fundamentals for university students, ensuring a deep understanding of complex concepts such as dynamic memory, concurrency, and revision control/git
- Conducted personalized tutoring sessions during weekly office hours for over 100 computer science students

### Theta Tau Professional Engineering Fraternity

Nov 2021 - Present

*Stony Brook University*

*Stony Brook, NY*

- Delegated responsibilities to a team of 15+ committee members, ensuring alignment with University Five Star requirements and improving overall team efficiency and achievement of 95% of objectives
- Organized 6 service events, overseeing the achievement of over 150 service hours by 30 fraternity members, enhancing community involvement and fostering a positive social impact
- Engaged with over 200 nonprofit organizations to orchestrate career preparation events tailored for STEM students, promoting career readiness and networking opportunities

## PROJECTS

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### Smart Cards | *Firebase, NextJS, React, JavaScript*

July 2024 – Present

- Engineered a SaaS online platform that utilizes the OpenAI API for creating, managing, and studying flashcards, resulting in a 40% growth in user engagement and a 25% boost in daily usage
- Implemented secure user authentication and payment processing using Clerk and Stripe, processing over 1,000 logins and \$500 in transactions with zero security incidents reported
- Integrated a high-performance back-end system with Firebase, supporting real-time data updates and handling more than 5,000 concurrent requests during peak periods

### Fair Maps | *Maven, Java, React, Python*

Jan 2024 – May 2024

- Supervised a team of 4 students to implement a web application that displayed district plans, state electoral results, and demographics, utilizing Leaflet to map the coordinates generated by the computational cluster SeaWulf
- Administered a script in Python that applied the MGGG Recom algorithm to mitigate gerrymandering in the state
- Utilized the Pandas library to clean and format 10,000 ensembles generated by the high-performance computing cluster SeaWulf, ensuring JSON data conforms to the MongoDB schema

### Movie & Play | *MySQL, HTML, Java*

Aug 2023 – Jan 2024

- Facilitated the implementation of a streaming service that showcased 300+ of the latest movies and shows, leveraging Apache Tomcat for the deployment and dynamic rendering of JavaServer Pages (JSPs)
- Built a Java DataBase Connectivity (JDBC) layer that handled 500+ SQL queries a day on the MySQL database
- Handled a relational database system using HTML, MySQL, and the Servlet API to simulate an online rental site

### Tunes | *MongoDB, Express, React, Node.js, Git*

Oct 2022 – May 2023

- Developed a dynamic music streaming platform integrating third-party APIs, such as the YouTube API, to empower users with customizable profiles, playlist creation, and seamless media playback in ReactJS
- Validated user's request prior to making queries to an external database, improving database lookup time by 20%
- Engineered an efficient and scalable back-end API to enable seamless communication and performance, utilizing Postman to test the API locally before deployment, resulting in a 50% decrease in post-development issues