

# Brian Mai

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## EDUCATION

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### California Polytechnic State University

September 2022 - June 2026

*Bachelor of Science in Computer Science*

*San Luis Obispo, CA*

- Relevant Coursework: Object Oriented Programming in C++, Data Structures, Intro to Computer Organization, Discrete Structures, Systems Programming, Design & Analysis of Algorithms, Intro to Software Engineering, Intro to Database Systems, Linear Algebra
- Activities: Treasurer: Cal Poly Linux User's Group, Member: Cal Poly Security Education Club

## EXPERIENCE

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### E. & J. Gallo Winery

Jun 2023 – August 2023

*Software Engineer Intern*

*Modesto, CA*

- Developed a real-time full-stack dashboard application using Next.js and Tailwind CSS displaying metadata from Oracle, AWS EC2 and RDS, and ServiceNow, allowing changes made in AWS directly through the application.
- Secured keys for the AWS SDK, ServiceNow API, and Oracle API by integrating AWS Secrets Manager.
- Provided visibility to the DevOps team, DBAs, and offshore team of over 30+ people
- Integrated authentication with Microsoft Azure Active Directory (Azure AD) to provide security
- Deployed to production by utilizing an S3 bucket in conjunction with Route 53 for DNS management and a Cloudfront load balancer for optimal performance and reliability
- Developed a GitLab CI pipeline to standardize the process of deploying NextJS applications to production

### Alan AI

Jun 2021 – Sep 2021

*Software Engineer Intern*

*Remote*

- Created a snake game using React, integrating voice-controlled movement with the Alan AI API
- Leveraged Axios to make requests to the API, created custom React hooks, and styled using Material UI
- Tested the API in various scenarios and configurations to ensure its proper functionality and reliability

### Kumon

Feb 2020 – Apr 2022

*Tutor*

*San Leandro, CA*

- Tutored and elementary school students on their math and reading. Used Excel Spreadsheets for progress reports
- Graded homework records, assessing academic progress and communicated students' progress to parents

## PROJECTS

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### AeChat | *React, Firebase, Google OAuth 2.0, Bootstrap CSS*

- Full-stack real-time chat application with commands, custom stickers, and file upload capabilities
- Integrated Google OAuth 2.0 for a robust registration and login system, ensuring user data remains protected and accessible only by authorized individuals.
- Used Google's Firebase Firestore as the primary database of all the chat logs and messages, allowing instant, real-time data of deleting and writing of messages

### MyTalk | *C, Sockets, TCP/IP*

- Utilized sockets programming in C to establish network connections, enabling real-time chat functionality.
- Demonstrated proficiency in handling low-level networking protocols, such as TCP/IPv4, to ensure reliable and secure data transmission.
- Implemented a server-client architecture based on IPv4 sockets, allowing the server to wait for incoming network connections on a specified IPv4 address and port.

### EC2 Minecraft Server | *AWS Lambda, Route53, EC2, S3*

- Hosted a Minecraft survival server on AWS EC2 integrating Route53 for a custom domain name.
- Created an AWS Lambda function to cut down on costs by 60% by having EC2 instance start on demand when a user tries to log into the server rather than having the instance run for the full duration of the day
- Used AWS S3 to store JSON files such as the whitelist, server properties, and backups of the world

## TECHNICAL SKILLS

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**Languages:** Python, C, C++, Java, JavaScript, Typescript, HTML, CSS

**Frameworks/ Libraries:** React, NextJS 13, Material-UI, Bootstrap CSS, Tailwind CSS

**Technologies:** GitLab, GitHub, AWS, Firebase, Git, JSON, VsCode, PuTTY