Luke Zhuang

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EDUCATION

California Polytechnic State University, San Luis Obispo
Bachelor of Science Degree in Computer Science **March 2025**

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Python, Java, C, C++, C#, HTML, CSS
Frameworks & Libraries: React, Node.js, Express, Axios, Bcrypt, JWT, REST APIs
Cloud & DevOps: AWS, Azure, Docker, GitHub Actions, CI/CD
Databases: MongoDB, MySQL
UI/UX Tools: Figma

WORK EXPERIENCE

Autonomous Vehicle Software Operator, Zoox **June 2025 – Present**

- Support the development of new autonomous vehicle software systems by collecting and analyzing real world operational data.
- Perform comprehensive tests on diverse routes and missions to ensure the safety, reliability, and performance of autonomous vehicle systems.
- Monitor vehicle performance, diagnose issues promptly, and communicate detailed findings to the dispatch and engineering teams.

Software Engineer, California Polytechnic State University **January 2025 – April 2025**

- Leveraged artificial intelligence and data analytics to predict the locations of missing persons
- Analyzed critical factors including elapsed time, travel distance, weather conditions, terrain, and age to improve prediction accuracy.
- Enhanced search operations by improving response time and increasing rescue success rates.

TECHNICAL PROJECTS

YouTube Clone **April 2025 – Present**

- Developed a full-stack web application replicating core YouTube features, including video upload, playback, user authentication, and comment functionality.
- Improved video streaming with lazy loading and efficient state management, cutting load times by 25%.

Inventory Management App **July 2024 – September 2024**

- Deployed application assets and data on Amazon S3, improving data retrieval speed by an estimated 26%.
- Integrated TypeScript to enforce type safety, enhancing code reliability and reducing bugs by 21%.
- Secure user authentication with encrypted passwords, reducing security vulnerabilities by 32%.

Blackjack **January 2024 – June 2024**

- Authentic gameplay features, including hand splitting, bet doubling, and special Blackjack payouts, increasing user engagement by 40%.
- Developed a fully responsive JavaScript Blackjack game compatible with desktop and mobile devices.

Server and Client **October 2023 – December 2023**

- Developed a lightweight web server in C supporting a targeted subset of HTTP methods for efficient request-response handling, improving latency by 15%.
- Implemented child process forking to handle up to 50 concurrent client requests, improving scalability.