

Alvan Zhuang

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EDUCATION

California State Polytechnic University, Pomona | Pomona, CA

Graduated: May 2025

B.S. - Computer Science

Major GPA: 4.0

Coursework: Computer Architecture, Computer Networks, Object-Oriented Design and Programming, Game Development, Mobile Development, Cloud Computing, Design and Analysis of Algorithms, Software Engineering.

Honors: Dean's List [8x], President's Honors List [4x]

EXPERIENCE

.Net Developer Intern | AAA Auto Club Enterprises

June 2025 - Present

- Designed and developed a modernized internal website to centralize multiple legacy sites, improving user experience, maintainability, and scalability.
- Collaborated cross-functionally with developers and sales teams to build internal tools supporting sales agents and internal operations.
- Participated in code reviews by testing and evaluating coworkers' code, offering constructive feedback to enhance functionality and maintainability.

Research Assistant | CPP Mobility Scooter Research Project

Jan 2024 - May 2025

- Collaborated with Kinesiology, Casa Colina Hospital, and UT San Antonio to develop machine learning models for detecting sway and movement changes to assess safety for mobility scooter users.
- Designed and implemented models using Vision Transformers, YOLOv8, and OpenCV2, improving the accuracy of movement classification and safety predictions.
- Optimized the mobile app's backend by resolving issues such as app crashes, improving data handling, streamlining user permissions, and ensuring smoother interactions for better performance and reliability.

Lab Assistant | CPP VR Lab Spring 2024

Jan 2024 - May 2024

- Provided critical feedback on ongoing projects, helping refine user experience and improve the quality of VR simulations.
 - Collaborated with students and a professor to troubleshoot and resolve software bugs, leveraging VR tools and debugging techniques to ensure smooth project execution.
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PROJECTS

Quizslayer (Group) | Unity, C#, AWS (S3, EC2), OpenAI API

Jan 2025 - May 2025

- Designed and developed a Unity-based AI quiz game with immersive gameplay and responsive UI.
- Integrated OpenAI API to generate quizzes from user input or uploaded PDFs, supporting both automated and manual quiz creation.
- Engineered API endpoints to manage communication between the Unity frontend and the backend services.

Cybersecurity VR Game (Group) | C#, Unity, Python, Flask, HTML, CSS, Javascript

Jan 2023 - May 2024

- Led a team in developing a VR simulation focused on educating users about cybersecurity threats, like phishing, with engaging gameplay mechanics and immersive user experience.
 - Collaborated with the data science team to analyze user data and adapt quizzes and study recommendations based on player performance, ensuring personalized learning paths.
 - Demonstrated the game at the Cal Poly Pomona Science Symposium, showing measurable improvements in user scores and cybersecurity skills.
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TECHNICAL TOOLS AND SKILLS

Languages: Java, C#, Python, HTML, CSS, JavaScript, Kotlin, LUA, SQL, VB

Technologies: Git, Unity, Android Studio, MongoDB, NoSQL, AWS (S3, EC2)

Frameworks/Tools: React.js, Node.js, .NET, ASP.NET MVC, Flask, PyTorch