Alvan Zhuang

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EDUCATION

California State Polytechnic University, Pomona | **Pomona, CA**   Expected Graduation May 2025
B.S. - Computer Science   *Total GPA: 3.99 /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, Numerical Methods.

EXPERIENCE

Research Assistant | CPP Mobility Scooter Research Project   *Jan 2024 - Present*
- Developed machine learning models using Vision Transformers
- Utilized different technologies to perform object detection and other needed processes
- Optimizing and adding features for the mobile app of the project.

STEM Instructor Intern | Lavner Education   *May 2024 - August 2024*
- Delivered high-quality educational instruction across diverse STEM subjects, including Web Development, Roblox World Building, Game Development (using GameMaker), and LUA Programming
- Provided technical support for both staff and students, ensuring smooth course operations by troubleshooting software and hardware issues
- Successfully taught and mentored over 50 students, fostering a hands-on learning environment that improved their technical skills and creativity in game design and development.

Aerospace Demo Assistant | CPP Inside   *April 2024 – August 2024*
- Developed interactive simulations and educational games using Unity, designed to help aerospace engineering students better understand complex aerospace concepts and solve challenging problems.
- Collaborated closely with aerospace faculty to align educational tools with curriculum goals, contributing to improved student comprehension and engagement in difficult subject areas

Lab Assistant | CPP VR lab Spring 2024   *Jan 2024 - May 2024*
- Assisted in setting up and configuring Virtual Reality (VR) projects, ensuring proper functionality and alignment with project requirements.
- Provided critical feedback on ongoing projects, helping refine user experience and improve the quality of VR simulations
- Collaborated with students and professor to troubleshoot and resolve software bugs, leveraging VR tools and debugging techniques to ensure smooth project execution

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PROJECTS

Modifier Mayhem (Group) | *C#, Unity*   *Aug 2023- Dec 2024*
- Developed a 3D first-person survival shooter game, contributing to both gameplay mechanics and visual design.
- Implemented core game systems such as a dynamic round system, interactive user interface (UI), and various power-ups to enhance player experience and replayability.
- Designed immersive game maps, balancing both aesthetics and functionality to create challenging and engaging environments for players.

Cybersecurity VR Game (Group) | Google ExploreCSR | *C#, Unity*   *Oct 2022 – May 2024*
- Led a team in the development of a VR game designed to teach users how to protect themselves from cyberattacks, utilizing Unity and C# for gameplay mechanics and immersive user experience
- Successfully demoed the game at the College of Science Research Symposium, Cal Poly Pomona, engaging over 20 participants in hands-on sessions that educated them on cybersecurity best practices

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TECHNICAL TOOLS AND SKILLS

Honors: Dean's List [6x], President's Honor's List [3x]

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

Frameworks: React.js, Pytorch, Node.js

Technologies: Git, Git Bash, Unity, Android Studio,

Database Systems: Replit, MongoDB, NoSQL