RAFAEL PADILLA PEREZ

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SKILLS

Tools: OpenGL, VS, CMake, Blender, Maya, Unity, Git, GitHub, Adobe Suite, Unix Shell, PowerShell, Jira.
Proficient: C#, C/C++, Python, GLSL, JavaScript, HTML5, CSS.

EXPERIENCE

Playroom | *Game Developer Intern*   *Jun. 2023 - Aug. 2023*
- Directed and developed a 3D platforming "party style" web-based online multiplayer video game.
- Designed a custom, scalable, web-based game engine architecture composed of Three.js for 3D graphics, Cannon.js for physics simulations, and React.js for UI.
- Increased physics engine capabilities by contributing Blender Python scripts to Cannon.js library.

SJSU Research Foundation | *Student Researcher*   *Feb. 2022 - Present*
- Creating Virtual Laboratory Environments (VLEs) with Unity Engine, C#, and Meta Quest 2.
- Implementing physics, rigid body-based interactions, and locomotion support via XR interaction toolkit.
- Writing a research paper for submission to SoftwareX scientific journal.

PROJECTS

Jelly Engine | *Senior Project*   *Aug. 2023 - Present*
- Driving creation of a Game Engine from a low level using C/C++ with advanced capabilities in real-time soft body physics simulation and computer graphics rendering.
- Architecting C/C++ scripting support, CMake building, and OpenGL support with GLSL shaders.

Taka Taka | *Video Game*   *Jan. 2022 - Present*
- Organizing a team of 8 developers with experience in art, music composition, and programming operating with AGILE, Trello, and Slack to develop a 2.5 D rhythm video game based on Japanese culture.
- Project started as a submission to Global Game Jam, and through participation as a Jam Organizer, became a "Global Game Jam Scholar," earning a full access pass to GDC.
- Programming gameplay mechanics and UI leveraging C# in Unity Engine, managing development roadmaps and Steam page releases. Deployed game's code to Steam, now standing at **300+ wishlists**.

LEADERSHIP EXPERIENCE

Game Development Club at SJSU | *President*   *Jul. 2022 - Aug. 2023*
- Oversaw a **14-member cabinet** applying AGILE to organize a club with more than 1,000 members and a semester-long game production and publication program, mentoring 8 game teams, of which **2 published games on Steam**.
- Headed management, member recruitment, professional outreach, workshops, tutorials, and event plans. Sponsored **18 members** to attend **GDC** via club fundraising.

EDUCATION

San Jose State University   Expected Graduation May 2024
- Bachelor of Science in Software Engineering | Cumulative **GPA: 3.5/4.00**
- Relevant coursework: Game Programming, Computer Graphics, Linear Algebra and Differential Equations, Data Structures and Algorithms, Operating Systems, Calculus I, II & III, Computer Networks.
- Honors: *Dean's Scholar*