Javier Sandoval
Graphics/Tools Software Engineer

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Job Experience

Software Engineer, Graphics, Monolith Productions   Jun 2023 – Current
- Worked on implementing high level graphics features like screen-space reflections and subsurface scattering
- Helped with triaging tasks for the graphics team
- Gained Experience with generating graphics features on consoles
- Communicated with interdisciplinary teams ensuring needs are met for workflows, features and visual quality
- Optimized baking tools to ensure faster iteration for team members
- Familiarized with large, legacy codebases
- Gained experience in implementing graphics systems on consoles

Engineer Intern, Innopeak Technology   May 2022 – Aug 2022
- Developed ray-traced graphical applications on mobile using Vulkan
- Utilized GPU profiling tools to examine performance issues
- Familiarized with the BSDF model for both rasterized and path-traced applications
- Showcased project at a SIGGRAPH booth

Projects

Technical Lead, Anesthesia - 3D Puzzle Horror Game   Sep 2021 – Apr 2022
- Communicated with interdisciplinary team members to implement core features into the game
- Used unreal to incorporate multiple game mechanics into the game
- Creating proper tools for designers to tweak and polish the mechanics at any time.
- Setup a build automation tool to create a build of the game to expedite the submission process
- Mentored teammates on how to properly create new mechanics in the game and helped resolve issues when problems arise

Graphics Programmer, Dimlight Dungeon - 2D Beat-Em-Up Game   Sep 2020 – Apr 2021
- Wrote the main graphics engine in OpenGL with the right set of features for the artists to port their work into the game
- Developed a custom entity-component-system engine that greatly helped with the game's performance
- Engineered a behavior system that helped gameplay programmers implement their logic in to the game
- Implemented crucial features to the game's custom level editor that helped the game designers properly create levels into our engine
- Used CMake to streamline the building process and decrease build times across multiple operating systems

Gameplay Programmer, Bug Blast - 2D Arcade Shooter Game   Jan 2020 – Apr 2020
- Engineered a basic component-based system to accelerate the process of adding logic to the game.
- Implemented Particle Systems to give the game a more polished look
- Developed technical leadership skills for delegating tasks for team members and setup proper due dates to ensure game was reaching the required deadlines
- Ensured game met high standards to be published on Steam and on Digipen's Game Gallery

Education

Computer Science in Real-Time Interactive Simulation,   Aug 2019 – Apr 2023
Digipen Institute of Technology

Skills

Programming Languages: C/C++ • Rust • HLSL • GLSL • SPIR-V • C# • Shaderlab • Zig ┃ **Engine Architecture:** Entity Component Systems • Component-Based Architecture ┃ **Graphics APIs:** OpenGL • Vulkan • DirectX ┃

Game Engines: Unreal Engine • Unreal Editor • Unity ┃ **Source Control:** Git • Perforce • Subversion ┃

VFX Experience: Unreal Niagara • Unity3D Visual Effects Graph • Unity3D Shuriken Particle System ┃ **Tools:** NVIDIA NSight Graphics • RenderDoc • PIX • ARM Graphics Analyzer ┃ **Platforms:** Android • Windows • Linux • MacOS ┃

Build Tools: CMake • Make • Catch2 • GTest ┃ **Development Skills:** Jira • Trello • Agile Development • Confluence