

Hardwin Bui

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SKILLS

Languages: C, C++, C#, GLSL, Lua, Python, Java, JavaScript

Technologies: Blueprints, OpenGL, Photon Unity Networking, Firebase, Playfab

Software: Unreal Game Engine, Unity Game Engine, GitHub, Visual Studio

Methodologies: Refactoring, Design Patterns, Unit Testing, SOLID, DRY, KISS, SCRUM

WORK EXPERIENCE

Unity Developer (*Freelance Work*)

2022-2023

- Developed prototypes and web browser mini-games tailored to clients' requests with Unity3D and C#
- Worked with client's **Firebase database** to update user data, such as email and account balance
- Reduced 10% of development time by making a **REST API** for Unity3D to Firebase with JavaScript
- Mini-games received a 4.6 star average rating from user testing

Unity Developer Intern (*i3M*)

2022

- Developed a 3D multiplayer action game to be included as a metaverse feature using Unity3D and C#
- Utilized Photon to implement **multiplayer combat and gameplay** over an online network
- Created enemy AI using **state machines** and Unity's **AI navigation system**
- Distributed tasks with teammates based on technical skill during **bi-weekly SCRUM meetings**

PROJECTS

2D Minecraft written in C++ using OpenGL [\[LINK\]](#) (*Personal Project*)

2024

- Created a simplified 2D version of Minecraft as a personal project to learn OpenGL in C++
- Implemented **infinite procedural terrain generation** using perlin noise
- Utilized **fragment** and **vertex shaders** to display sprites and manage camera view in **GLSL**

Portal Game developed in Unreal Engine 5 [\[LINK\]](#) (*Personal Project*)

2023-2024

- Solo-developed a 3D puzzle game with portals using Unreal Engine 5, Blueprints, and C++
- Used Blueprints and vector logic to create the **physics and rendering for portal travel** gameplay
- Created a **subsystem** using C++ to better manage portal spawning and relocation

Lead Mobile Game Programmer [\[LINK\]](#) (*Indie Game Team*)

2021-2022

- Produced a 2D platform puzzler **released on Google Play Store** using Unity3D and C#
- Used **modular programming** to create object templates to experiment with gameplay ideas
- Designed and implemented **responsive UI** to support multiple screen resolutions

EDUCATION

Master of Science: Software Engineering

Dec 2023

San Jose State University

Bachelor of Science: Computer Science with Minor in Applied Mathematics

June 2020

University of California - Santa Cruz

GPA: 3.72