

Charles Boudousquie

Tools and AI Developer

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<https://github.com/charlesboudousquie/Portfolio>

SUMMARY

Software Engineer with 4 years of video game programming experience including Graphics, Particle Systems, Built from scratch 3D editors and Behavior Trees.

COMPUTER SKILLS

Languages

- C++ (4 years)
- C#
- Python

Operating Systems

- Windows
- Linux

API

- OpenGL 3 / 4.3
- ImGui / ImGuiZmo
- Assimp
- Bullet3
- GLFW, SDL
- Berkeley Sockets (Windows and Linux)

Tools

- CMake
- Doxygen
- Visual Studio
- Git (command line)
- Unity, Unreal Engine 4

Soft Skills

- Working on a team
- Pair Programming
- Always mentoring and open to new ideas

DigiPen Institute of Technology

- Basic Networking
- OpenGL 3D Rendering, Reflection, Refraction, Texture, and Deferred Shading.
- AI pathing and problem solving

ACADEMIC PROJECTS

Engine Programmer 1/2018– 4/2018

Gun Garden – 2D Action Bullet Hell

- Developed and maintained Customizable Particle System
- Created Menus and Tutorial level

3D Editor Programmer 9/2018– 3/2019

Project Abyss – 3D First Person Light Mixing Puzzle Platformer

- Researched and integrated tools for custom 3D video game editor
- Set up graphics using OpenGL.
- Integrated Bullet3D Wireframe and
- Bounding Box debug drawing
- Added Translation, Rotation, and Scale Gizmos
- Ray Picking to move objects with mouse
- Integrated Nlohmann JSON for serialization
- Implemented scene viewing
- FPS Camera and Editor Mode Viewing
- Undo/Redo functionality (save state)

Reformed Studios 9/2019 – 4/2020

3D Tech Demo

- Implemented efficient, shared behavior tree system
- Created Behavior trees with said system

Personal Project 5/2020 – 8/2020

- Created full flight 3D Octree navigation

EDUCATION

Bachelor of Science in Computer Science in Real-Time Interactive Simulation – Redmond, WA
9/2016 – 4/2021