



Email: philip.a.hollingsworth@gmail.com  
Phone: xxx-xxx-xxxx  
Linkedin: www.linkedin.com/in/hollingsworthPhilip  
Portfolio: www.philiphollingsworth.com/projects/

**Programming    Game Systems Design    Tools Developer**

## SKILLS

### PROGRAMING LANGUAGES

- C/C++/C#  
(Extensively Proficient)
- Java
- ARM/x86 Assembly (Familiar)
- MySQL (Familiar)
- VBA (For Excel Macros)
- Lua (Familiar)
- Python (Familiar)

### TECHNICAL SOFTWARE

- Unreal 4 Engine
- Unity 2017
- Visual Studio
- Microsoft Excel  
(Extensively Proficient)
- Dr. Memory and Valgrind
- Windows/Linux command line

### LIBRARIES

- Boost
- Physx
- Jsoncpp
- QT (Familiar)/IMGUI
- OpenGL/Directx 11 (Familiar)

### MISCELLANEOUS

- 3D Camera Programming
- Multi-threaded Job Systems
- Nav-mesh pathfinding
- Agile/SCRUM Methodologies  
(Familiar)
- Behavior Trees
- Git-flow paradigm
- Linear Algebra/ 3D Math

### SOFT SKILLS

- Leadership
- Conflict Resolution
- Task Management

### TEAM/COMMUNICATION

#### SOFTWARE

- Jira
- Discord
- Trello

## EXPERIENCE

### Professional

Software Engineer, *Cryptic Studios, Summer 2018-Ongoing*

*Worked as an infrastructure engineer from summer 2018-summer 2019, then as a Live Game Software engineer from summer 2019 to now*

- While on infrastructure, implemented rpc calls for a backend end system exposing features of our systems to our publishers front end customer service
- Refactored the company's proprietary file archive format to support 64 bit file sizes, while maintaining backwards compatibility
- Implemented support for the company's new support ticketing system, while communicating with our publishers customer service representatives to decide on features
- While on live game software, communicated with production, design, and QA departments to resolve live software issues while simultaneously implementing code for new features coming down the pipeline

Game Project Tutor, DigiPen, *Fall 2017-May 2018*

- Assisted and advised students in matters of game project development and engine architecture.

Lead Teacher, DigiPen *Project Fun, August 2016*

- Taught an online class to high school students about implementing various gameplay features in Java. Taught concepts such as basic physics, UI programming, and inheritance-based architecture

### Student Projects

Producer/ AI and Gameplay Programmer, *Invi, Fall 2017-Spring 2018*

*Team Composition: 3 Programmers*

*Project Concept: A 3D tech demo with mechanics in the style of Crysis made in Unity*

- Implementation of the Behavior tree based AI system in C# that was extensible enough to be used across 4 different projects.
- Implemented complex vision shape system in C#, with multiple cones representing different levels of certainty, made to be tweakable by designers.
- Implemented custom nav-mesh pathfinding (not generation) which factored in exposure to the player.
- Implementation of tactical position selection system in C# that utilizes a fuzzy-utility system for heuristics so that agents can choose cover positions and hiding spots intelligently.
- Implementation of a GUI testing framework that allowed developers to perform unit, functional, integration, and stress testing on their code and visualize the results either in the GUI or in the main scene view
- Collaborated with 4 other programmers and 2 designers to develop the game

## DIGITAL CONTENT CREATION SOFTWARE

- Photoshop (Familiar)
- Maya (Familiar)
- Audacity (Familiar)

- Managed submission and milestone requirements

Producer/ Tools and Gameplay Programmer, **Chipper**, Fall 2016-Spring 2017

*Team Composition: 4 Programmers, 2 Designers*

*Project Concept: A 3D collectathon in the style of Banjo Kazooie, in a custom C++ component based engine*

- Through the process of implementing the multi-threaded core architecture, the game logic structure, the reflection system, and the generic JSON parser/serializer, wrote over 5000 lines of code for the project
- Implemented a behavior tree framework and a 3D waypoint graph connection generator into the Unity 5 prototype to explore different gameplay possibilities.
- Rewrote physics engine to use Physx to improve code clarity and performance
- Collaborated with 4 other programmers and 2 designers to develop the game
- Managed submission and milestone requirements

### Solo Projects

System Designer/AI and Gameplay Programmer, **Qapsule Quest**, Fall 2017

*Project Concept: A short 3D Souls-Like melee combat game made in Unity*

- Implemented 4 unique weapon move sets for the player, 2 for enemies, and 1 for a boss. All of these were made using Unity's animation system.

Designer/ Gameplay Programmer, **Car Game**, Fall 2016

*Project Concept: A short arcade driving game made in Unreal 4*

- Implemented a vehicle controller in blueprint that inherited from Unreal's built in wheeled vehicle blueprint, with some light C++ functionality.
- Created and playtested 2 separate levels for specific types of engagement

System Designer, **Inferno of Victory**, 2 weeks in Summer 2015

*Project Concept: A 2 player combat board game made in the style of action movies*

- Designed 4 character types each with unique abilities and roles.
- Created a multi-level map that is a hybrid of regions and a grid, and has a mix of hard and soft cover to provide deep and dynamic gameplay.
- Wrote 60+ pages of design documentation to indicate my process

Sole Developer, Hobby Game Engine, Fall 2017-Ongoing

- Implemented entire engine from scratch using c++ and low level libraries like OpenGL, stbi, and boost.
- Implemented basic 2d graphics engine with texture rendering.

### Personal/Extra Curricular

Eagle Scout rank, Boy Scouts of America, Spring 2014-Summer 2014

- Nearly two years of leadership experience
- Designed, managed, and supervised numerous volunteers on a project to correct flooding in a historical church's basement

### EDUCATION

DigiPen Institute of Technology, Redmond, WA, graduated May 2018

- Bachelor of Science, Computer Science and Game Design / Minors in English and Mathematics
- DigiPen Presidential Merit Scholarship; Dean's List for 3 consecutive semesters