

Thompson Lee

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Portfolio: <http://asperatology.me>

Objective

Full-time positions in software engineering and/or game development.

Projects

Master's Project: Multiplier: Real-time Strategy Unit Balancing Tool, July 2015 – May 2016

- Created a tool for end users to balance unit attributes in real-time strategy games in C# with Unity.
- Added game A.I. players in Single player mode to allow end users to playtest their units against A.I.
- Used Unity Networking for Multiplayer mode to test with Human vs. Human game unit interactions.
- Developed Simulation mode for end users to observe and tweak game units through simulation.

Independent Project: Agar.io FeedSplit Helper, March 2015

- Repurposed TwitchPlaysPokémon Input Bot for use with an online game, Agar.io, in C++.
- Controlled with Q, E, and Z keys. Q continuously shoot mass, E endlessly split cells, and Z quits.

Game Development: Rotation Puzzle Game, February 2015

- Inspired by wooden labyrinths, player rotates the board to find a way to reach the exit.
- Wrote in C++, aimed to preserve game state on memory stack, and game data on memory heap.
- Experimented with different methods of accessing data array, allowing unique gameplay.

Independent Project: Twitch Plays Pokémon Input Bot, February 2015

- Utilized Win32 API to enter input strings into the Twitch Chat textbox, written in C++.
- Added flexibility to allow inputs to focus on certain strategies to progress through the game.

Game Engine Development: Dragonfly, WPI, September 2014 – October 2014

- Designed a 2D text-based game engine that handles creation and destruction of game objects, manipulation of game entities, and collision handling/response mechanisms.
- Programmed and implemented a game engine from scratch on a team of two in C++.

Independent Project: Pokémon Walking, December 2013 – July 2014

- Developed a top-down role-playing game from scratch without using existing game engines in Java.
- Created a game level editor to assist in creation of custom levels and areas for the game.
- Created a scripting editor to assist in dialogues and event triggers within custom levels and areas.
- Iterated upon game mechanics used in original games for future implementations and game design.

Independent Project: Pixavive Survival, October 2013 – February 2014

- Implemented game A.I. using A* pathfinding algorithm in a real-time strategy game in Java.
- Balanced the game by adding a cooldown system and reducing the complexity of the game rules.

Major Qualifying Project (MQP): Marble Run, September 2012 – May 2013

- Used accelerometers and gyroscopic sensors as inputs for a top-down tilt-and-roll game written for Android for immersive gameplay in Java.
- Designed and programmed the game engine in Java as the lead programmer in a team of three.

Independent Project: Bluetooth 5-way Relay Chat, January 2013 – February 2013

- Utilized Bluetooth on multiple Android smartphones and devices to scan, discover and connect to each other simultaneously using a server-client model in Java.
- Experimented the hypothesis that it is possible for up to five devices can connect when all five devices are relaying together within a short range.
- Communicated with other devices by sending and receiving text messages through Bluetooth.

Education

Master of Science in Interactive Media and Game Development

Worcester Polytechnic Institute (WPI), May 2016

Bachelor of Science in Computer Science and Information Engineering

National Taitung University (NTTU), July 2013

Work Experience

Student Lab Assistant, Worcester Polytechnic Institute, Worcester, MA

Part-time Job, September 2015 – May 2016

Officer, National Police Agency, Special Police Corps, Taipei, Taiwan

Conscription/Military Service, August 2013 – July 2014

Waiter, No Borders Family Restaurant, Taitung, Taiwan

Part-time Job, March 2013 – June 2013

Skills

Programming Languages: Java, C++, C, C#

Tools: Unity, Unreal Engine 4, Neverwinter Nights 2 Toolset, Adobe Photoshop CS6/CC, Corel Draw X4, GIMP, GraphicsGale, Audacity, Camtasia Studio 8, Fraps, Visual Studios

Foreign Language: Chinese (Mandarin, Fluent)