Seung Youp Baek

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SUMMARY

Looking for an opportunity as an entry level software engineer. Self-motivated and passionate about software engineering and game development. Quick at learning new skills and acquiring knowledge. Optimistic, team player and problem solver.

EDUCATION

UNIVERSITY OF TEXAS AT AUSTIN Dec, 2015

- Bachelor of Science in Computer Science

Certification: Game Development Certificate (**pdf**)

SKILLS

Programming: C++, OpenGL, C#, Java, Python
Tools: Cocos2d-X, Adobe Photoshop, Unity

COURSEWORK

Black Monday - 2D Game Development Capstone (Download, Trailer) **2015**

- Developed the game with the group of 6 and participated as a programmer.
- Implemented core game mechanics, inputs, animations and tutorial.
- Built in-game map editor to help teammates to play and test new game maps quickly.
- Assisted artists to optimize game assets for better performances.
- Assisted UI programmer for UI animations.
- Used Unity, C# and Git for development and Scrum for agile development.

PROJECTS

General Game Development (Github) **Present**

- Implementing libraries and wrappers that are commonly used in game development, such as AI, joystick input and audio in C++.
- Developing a game engine that supports 2D, 3D, and UI in C++ and OpenGL. Learning techniques by implementing features that are commonly used in commercial game engines.

Voxel Engine (Video) **2018**

- Developed a voxel engine and prototype game with C++ and OpenGL.
- Used noise algorithm to procedurally generate random world, regions, terrains, structures, and biomes based on given random seed.
- Implemented frustum culling and batching to optimize rendering. Generated voxel meshes in multiple background threads.
- Wrote shaders for smooth lighting, distance fog, and skybox.

Monster Hunter World Armor Set Searcher (Download) **2018**

- Developed a tool that helps players to find desired armor sets in the game Monster Hunter World using C++ and Win32 API.
- Implemented an algorithm that searches all possible combinations of armor sets that match desired skills with variations and options.
- The search runs on the background thread and displays results in simple text format.
- Supports English and Korean. Shared to multiple Monster Hunter communities.

Visualization (Github, Video) **2017**

- Developed an application that visualizes algorithms using C++ and Cocos2d-X engine.
- The application includes quadtree, polygon triangulation, pathfinding, visibility, packing, and sorting.
- Implemented algorithms to run step by step to visualize the process.
- Users can interact and simulate all algorithms.
- Download available in Github Wiki page.

Minecraft Server Plugin **2014 - 2015**

- Developed Minecraft server plugin using Java and Minecraft API. Released and sold on Minecraft community market.
- Maintained and updated multiple versions of plugin for different versions of Minecraft.
- Communicated with customers for bug fixes, new features, and troubleshooting.
- Created a Github wiki page for the plugin to help customers to understand the plugin.

iOS 2D Mobile Game - Meteor Tap **2013**

- Developed a fully functional 2D mobile game called Meteor Tap in Objective-C and Cocos2d-iPhone engine. Released on Apple App Store for one year.
- Participated in entire game from design to programming, art, and audio.

Game Jam

Ludum Dare (38, 39) **2017**

- Participated Ludum Dare game jam 38 and 39 as solo. The random theme was selected at the start of the jam and 72 hours were given before submission.
- Experienced lots of trials and errors. Practiced time and task management. Learned my weaknesses from self-postmortem after the jam.
- Used C++ and C# for programming, Cocos2d-X, and Unity for the game engine and Photoshop for game art assets.