Juyong Jeong

Gameplay programmer

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Technical Skills

- Languages**: C++, Python, C#, C, GLSL**
- Tools**: Visual Studio, Git, OpenGL, Unity**
- Skills**: Data Structure, Algorithm Analysis, Game Artificial Intelligence, 3D Graphics**

Academic Projects

Gameplay programmer - Welcome to the Future (Team of 5 Programmers) *01/2020 - 05/2020*
2.5D side-scrolling shooting game (C#, Unity)

- Implemented a custom behavior tree structure to make design boss A.I. easy and to produce several types of them
- Designed enemy attack patterns such as flocking, shooting, throwing a grenade

Engine Programmer - JEngine (Side Project) *09/2017- Present*
A framework to demonstrate 3D graphics and A.I. techniques (C++, OpenGL, GLSL, custom engine)

- Built the framework using builder design pattern which allows simple addition of user-written game logics
- Implemented a graphic system to demonstrate rendering 3D models, texts, particle effects, and lighting effects
- Demonstrated A.I. techniques such as agents sending messages to each other with a finite state machine and steering behaviors such as wandering, arrival, seeking, and evading

AI Programmer - Candlelight (Team of 3 Programmers, 4 Designers) *09/2018 - 12/2019*
3D 1st person horror game (C#, Unity)

- Developed a custom behavior tree which allows inserting and removing any behavior during runtime
- Modeled ghost A.I. using behavior tree such as detecting, chasing the player, singing, and dancing around
- Designed ghost appearance events adding activation conditions into the A.I. behavior tree

Engine Programmer - Captain Korea (Team of 2 Programmers) *09/2016 - 05/2017*
2D top-down view action/sneaking game (C++, OpenGL, GLSL, custom engine)

- Constructed a component-based game engine to reuse the game component
- Designed state manager which allows modification of game states to be easy and time-efficient during the development
- Developed a JSON parser which loads window size, fullscreen mode, and game level data
- Built enemy A.I. tracking the player using A* pathfinding algorithm with the predefined nodes in the game level
- Implemented visual effects such as rippling, particle effect on the main menu using GLSL

Professional Experience

Engine *Programmer* *09/2017 - 06/2018*
DigiPen Institute of Technology (Daegu, South Korea)

- Built 2D component-based game engine for students who take a game project class
- Developed a graphic system which supports rendering textures, animations, texts, and particle effects
- Updated the engine with new features and bug fixes gathering feedback from students

Education

BS in Computer Science in Real-Time Interactive Simulation *04/2020*
DigiPen Institute of Technology (Redmond, United States)