Juyong Jeong

Software Engineer

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Technical Skills

- Languages**: C++, Python, C#, C, JavaScript**
- Tools**: Visual Studio, Git, OpenGL, GLSL, Unity Engine, ReactJS**
- Skills**: Data structure, Algorithm analysis, Artificial intelligence, Parallel programming, 3D graphics, Data mining**

Academic Projects

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

- Designing game boss A.I. which reacts immediately from the game environment using an event-driven behavior tree
- Developing GUI to provide a visual scheme of boss A.I. using imgui node editor to help saving time
- Implementing enemy movements such as seeking, evading, and flocking to design vivid moving enemies

Software Engineer - JEngine (Solo Side Project) *09/2017- Present*
3D Framework to demonstrate 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 3D 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 ghost A.I. using behavior tree which supports dynamic update to give the flexibility to design the A.I. and prevent sameness of enemy actions
- Modeled the ghost A.I. movements such as chasing the player, wandering around, and through a wall

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 the game base engine introducing the entity-component system 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 game engine for students who take a game project class
- Designed game object which contains every component to provide a simple interface
- Provided state manager to let the students can pause, resume, and change the game scene
- Developed a graphic system which supports rendering textures, animations, texts, and particle effects
- 8 teams of 28 students worked on their project with this engine in the class
- Instructed students on how to use the engine
- Gathered feedback from students and updated the engine with new features and bug fixes

Education

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