YEONGKI BAEK

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Skills

Languages
- C / C++ (14/17)

Software & Tools
- Visual Studio
- IntelliJ
- SVN
- Git

API & Libraries
- OpenGL
- GLFW
- FmodEX
- STL
- Boost

Physics / Math
- Vector Calculus
- Linear Algebra
- Statistics/Probability
- Fuzzy Logic

Graphics Programming
- PBR
- Deferred Shading
- GLSL Shader

Experience

Intern Mar 2010 - Aug 2010

CobaltRay - Seoul, Korea

- Programmed a tool that helps to sync sheet music and song easier using MFC.
- Developed code fixes and enhancements for inclusion in future code releases and patches.
- Collaborated with product management to design, build and test systems.
- Built, tested and deployed scalable, highly available and modular software products.

Projects

AI Programmer May 2017 - Present

Starcraft : Broodwar Solo Project

"A custom AI bot with influence map", BWAPI, C++

- Researched, evaluated, and designed the conceptual model for the real-time simulation game from scratch
- Developed various data structures and algorithms to make dynamic strategies
- Integrated 3rd party library (map analyzer), Implemented custom path finder for the efficient movement
- Examined the performance and optimized the system **300%** faster than former version by special data structure

Graphics and Gameplay Programmer Sep 2016 – Apr 2017

Alaska Roll 5 Person Team

"A 3D shooter rolling a snowball", C++ Custom Engine

- Built a custom deferred shading based graphic render system using OpenGL which increases performance and stability
- Led three programmers with task prioritization and delegation to best meet deadlines and milestone expectations
- Assisted physics programmer to build collision system for better performance; O(n^3) to O(n^2)
- Designed the rule base and programmed multiple aspects including AI and basic gameplay

Gameplay Programmer, Designer Sep 2010 - Apr 2011

AMAZE 7 Person Team

"A 2D puzzle shooter finding a route through the maze against the enemies", C++ Custom Engine

- Created a tool that allows designer to procedurally generate tile map without difficulty
- Constructed particle engine, text rendering systems and UI, increasing creative visual appeal in the game
- Wrote scalable gameplay components allowing designers to iterate on 3 bosses and 8 enemies across 5 levels
- Designed, implemented, tested, and iterated on the game's tutorial alongside the lead designer

Education

Bachelor of Science in Computer Science in Real-Time Interactive Simulation Graduating 2018

(ABET, CAC Accredited Program)

Minor in Mathematics

DigiPen Institute of Technology (Redmond, WA)