

Jinwoo Choi

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EDUCATION

DigiPen Institute of Technology

Redmond, WA | 08/2021 - 04/2023(expected)

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

Courses: Advanced C/C++, Data Structures, Computer Graphics, Algorithm Analysis, Linear Algebra, Calculus, Curve

Keimyung University

Daegu, Republic of Korea | 03/2017 - 08/2019

Bachelor of Science in Computer Science

EXPERIENCE

TikTok

Mountain View, CA | 05/2022 - 08/2022

AR Effect Software Engineer Intern, Team of Intelligent Creation

- Implemented **Deferred Shading** for the Uber Shader(6000+ lines) to improve the performance limitations of TikTok stickers
- Integrating Physics Based Rendering, Environment Mapping, UV, Normal Texture, Fresnel to the Deferred Shading
- Implemented Transparent, **Temporal Anti-Aliasing** to the shader, and integrated Deferred shading with Forward Shading

Undergraduate Teaching Assistant

Redmond, WA | 09/2021 - 12/2021

Course: High-Level Programming, Advanced C/C++, Computer Graphics, Game Project

- Answering questions about C++, Graphics from undergraduate students
- Giving feedbacks for students' game projects / Grading assignments

Republic of Korea Army

Paju, Republic of Korea | 08/2019 - 02/2021

Compulsory military service / Staff Sergeant

SKILLS

Programming Language & API: C++, C, C#, OpenGL

Tools: Visual Studio, VS Code, git

Math: Linear Algebra, Calculus, Curve, Quaternion

PROJECTS

Graphics Engine

03/2021 – In Progress

Implement various Graphics techniques with using own Engine

- Implemented **Phong Shading** with Point, Directional, and Spotlights
- Implemented **Hybrid Rendering**(Deferred Shading + Forward Shading)
- Implemented Environment Mapping and used this feature for **Reflect** and **Refract**
- Implemented **GJK algorithm** for detecting collision between convex objects
- Implemented own **Object Loader** which can read vertices information from obj file
- Made an equation that removes the duplicate normal value while generating vertex normal with using hash
- Implemented **Animation** and make model moving along the path with using arc length table

Dodge-BLUERACOON

12/2018 - 04/2019

An Android Casual Game collaborated with Artist

- Designed game concept and implemented game logic, player movement, leader board system with C#
- Published on the **Google Play**

Tetris Game

12/2017 - 01/2018

Tetris Game on console window with using C

- Create Tetris Game with using Basic C skills: Function, Malloc and Free, Enum, Struct
- Used File I/O to manage number of games