

# Ilgwon Ha

Graphics Programmer

## Contact

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## Skills

### Programming Languages

C C++ C# Python GLSL

### Tools

Git SVN Visual Studio Vim

Visual Studio Code RenderDoc

### Frameworks

Unity OpenGL Coco2dx

### Languages

Korean English

### Knowledge

Data Structure Algorithm

Graphics Programming

Game Engine Architecture

Network Programming

Low-level Programming

Gameplay Programming

Linear Algebra Motion Dynamics

Calculus

## Education

### Digipen Institute of Technology

Expected to graduate in 2021

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

## Projects

### Flowery Gears

**Graphics Programmer** / Student Team / Oct 2019 - Present

Animation film project using Unity3d

- Wrote Maya plugin in python to batch export multiple maya files to fbxs
- Implemented batch fbx importer in Unity3d
- Researched supported graphics features in Unity3d to make aesthetic visual and get benefits of real-time rendering for the film project

### Zen Engine

**Sole Programmer** / Personal Project / Jun 2019 - Present

Renderer framework for personal graphics experiments

- All implementation has been done by using C language
- Supports OpenGL 4
- Designed APIs carefully for ease of use
- Implemented resource loader for meshes, images, shaders, etc
- Built scene manager that manages initialization and cleanup of resources in a scene
- Abstracted Windows OS specific APIs

### Project MARS

**Gameplay Programmer** / Devsisters / May 2017- Oct 2018

- Optimized procedural road generating algorithm by using multithreaded job system of DOTS
- Developed UIs related to core mechanics
- Integrated gRPC into the unity project

### Cookie Run: Overbreak

**Gameplay Programmer** / Devsisters / Aug 2016 - May 2017

- Implemented a playable game character and UIs
- Created 2d cutscenes by using customized cocos2dx UI builder

### La Tour

**Engine Programmer** / Student Team / Sep 2015 - Jun 2016

- Built component-based engine architecture
- Built data-driven game object system to make iteration faster

### Centiare

**Lead Programmer** / Student Team / Mar 2015 - Jun 2015

- Built game object system
- Implemented player control and collision with platforms
- Implemented AI and animation of bosses

### Tender is The Night

**Lead Programmer** / Student Team / Sep 2014 - Dec 2014

- Implemented player control, puzzles, and dialogue system

### 모두의 뽕뽕뽕

**Gameplay Programmer** / Starfruits / Jan 2013 - Feb 2013

- Prototyped a mobile game with a game engine in Java

### Pop Cat

**Sole Programmer** / Student Team / Oct 2012 - Dec 2012

- Worked as a sole programmer
- Implemented every gameplay and UI