

# H.M. HWANG

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[github.com/1-moon](https://github.com/1-moon)

## EDUCATION

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### University of Leeds

BS Computer Science

*Focus: Operating System, Computer Graphic, Software Engineering*

Leeds, Yorkshire

Sep 2021 – Aug 2024

### Foundation Year

Applied Mathematics, Pure Mathematics, Physics

Leeds, Yorkshire

Sep 2020 – Jun 2021

### University of GWN (Drop-out)

BS Metal engineering

Kang won, Korea

Mar 2016~2019

### Yong Moon High School

Mathematics, Sciences

Seoul, Korea

Mar 2014 – Feb 2016

## SKILLS

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Technologies: C/C++, Python, ROS2, Arduino, Qt, MySQL

Core: Version Control, Agile Scrum

API: OpenGL (modern), OpenCV, Mediapipe

## PROJECTS

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### Ray-tracing Bezier curve grid C/C++

[github.com/1moon/RT\\_curve](https://github.com/1moon/RT_curve)

Created a mesh in the space where ray hits for my dissertation, adapting Bezier curve principle and a book on Ray tracer by P. Shirley.

### Spaceship lift-off simulation C/C++, OpenGL

[github.com/1moon/spaceSim](https://github.com/1moon/spaceSim)

Collaborated with two classmates as a group project to implement the simulation that a spaceship lifts off from launch platform, featuring basic 3D rendering, track cameras and so on.

### Video editing Application C++ in Qt

[github.com/1moon/videoEdit](https://github.com/1moon/videoEdit)

Collaborated with a team of four students to develop a video editor sized in smartphone in User Interface Module, using Qt software, Scrum and Gitlab.

## EXPERIENCE

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### Republic of Korea NAVY

Korea Navy 2<sup>nd</sup> Fleet

*Rader Operator*

Jan 2017 – Feb 2019

- Collaborated with a team of professional Rader operators to detect North Korean battleship, allied forces and shipping ships.
- Joined in virtual simulation training with U.S NAVY using KNTDS (Korean Naval Tactical Data System), National Confidential Rader System.

**Sungkyunkwan University**

Natural Sciences campus

*Computer graphic lab intern*

Sep 2024 – Nov 2024

- Learned fundamental concepts in computer graphics with OpenGL & GLSL.
- Authored comprehensive reports on acquired knowledge and skills (e.g., Mipmaps, compute buffers, and more).

**Addinedu AI/Robot Bootcamp**

Gasam Digital complex

*Contributor*

Dec 2024 – May 2025

- Led an Exploratory Data Analysis (EDA) team project (To buy a home in areas near Seongnam, Korea), utilizing APIs and data analysis libraries to process and analyse relevant financial datasets.
- Developed an IoT-based robotic pickup system enabling automated order fulfillment in unmanned retail stores through WiFi communication between robots, display shelves, and administrators.
- Led a deep learning team project to develop a smart fitness app, utilizing an LSTM model trained on MediaPipe-extracted pose keypoints for real-time exercise recognition and feedback.