H.M. HWANG

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github.com/1-moon

EDUCATION

University of Leeds	Leeds, Yorkshire
BS Computer Science	Sep 2021 – Aug 2024
Focus: Operating System, Computer Graphic, Software Engineering	
Foundation Year	Leeds, Yorkshire
Applied Mathematics, Pure Mathematics, Physics	Sep 2020 – Jun 2021
University of GWNU (Drop-out)	Kang won, Korea
BS Metal engineering	Mar 2016~2019
Yong Moon High School	Seoul, Korea
Mathematics, Sciences	Mar 2014 – Feb 2016

SKILLS

Technologies:	C/C++, Python, ROS2, Arduino, Qt, MySQL
Core:	Version Control, Agile Scrum
API:	OpenGL (modern), OpenCV, Mediapipe

PROJECTS

Fitness AI Agent *Python, Mediapipe, Qt*   github.com/1-moon/Fitness-Trainer

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.

Unmanned Store Automation System *C/C++, Arduino, PyQt*   github.com/1-moon/iot-unmannedStore

Developed an IoT-based robotic pickup system enabling automated order fulfillment in unmanned retail stores through WiFi communication between robots, display shelves, and administrators.

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

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*

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

Republic of Korea NAVY   Korea Navy 2nd 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   Gasan Digital complex

Contributor   Dec 2024 – May 2025

- Participated in four team projects (EDA, IoT, ML/DL, ROS) at the bootcamp to learn about AI in autonomous mobile robots.
- Gained hands-on experience in integrating hardware and software, enhancing project capabilities and technological understanding.