Seungheon (Hoon) Yang

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EDUCATION

University of California, Irvine Sep 2021 – Present
Bachelor of Science in Computer Engineering **Cumulative GPA:** 3.73/4.00
Honors & Memberships:
IEEE-Eta Kappa Nu (HKN) Honor Society – UCI Chapter
Dean's Honor List (7 of 8 quarters)
Relevant Coursework: Advanced C Programming, Computer Architecture, Computer Networks, Network Analysis I–II, Digital Systems and Logic, Discrete Mathematics

PROJECTS

MyToDo | *Python, Flask, MongoDB, Jinja2, HTML/CSS* Dec 2025 – Present
- Implemented a task management web application with full CRUD operations using Flask and MongoDB
- Designed server-rendered pages using Jinja2 templates to create, update, and delete tasks

Zotbotics | *Python, Arduino C/C++, Raspberry Pi* Sep 2025 – Present
Software Subteam
- Implementing software tools for monitoring robot system status and telemetry during development and testing
- Integrated an AI chatbot pipeline using STT, TTS, and LLM-based text response APIs, enabling natural human–robot interaction

Portfolio Website | *HTML, CSS, JavaScript* Dec 2025 – Present
- Designed and developed a fully responsive personal portfolio website showcasing technical projects and experiences
- Integrated email functionality using EmailJS to enable direct contact through the website

Drone Project | *Embedded Systems, UAV Hardware, ArduPilot* Sep 2025 – Dec 2025
- Assembled and integrated UAV hardware, including flight controller, ESCs, motors, GPS, batteries, and radio systems, with extensive soldering and system validation
- Configured ArduPilot and ESP32-based telemetry to execute GPS-guided autonomous waypoint missions with real-time communication to a ground control station

EXPERIENCE

Undergraduate Research – AICPS Lab Sep 2025 – Present
Research Assistant (Supervisor: Sadman Sakib, Ph.D. Student) *Irvine, CA*
- Conducted a research project under Professor Mohammad Al Faruque to develop a multi-robot navigation framework using vision-language models, enabling collaborative planning, message sharing, and assisted navigation across multiple UAVs
- Developed an aerial VLN evaluation and visualization pipeline in OpenUAV, including trajectory analysis, metric extraction, and scene-level video generation
- Implemented closed-loop simulations, custom inputs, and automated scripts to streamline large-scale OpenUAV experiments
- Designing and developing a multi-agent LLM-based navigation system on a physical UAV platform

Institute of Electrical and Electronic Engineers (IEEE) Sep 2025 – Present
University of California, Irvine *Irvine, CA*
- Engaged in the Open Project Space (OPS) program, contributing to the development of innovative engineering projects
- Developing and optimizing microcontroller-based applications using Raspberry Pi and Arduino

CERTIFICATIONS

DeepLearning.AI TensorFlow Developer Specialization – DeepLearning.AI via Coursera Feb 2025 – Mar 2025
Embedded Software Development with C – EDUCBA via Coursera Feb 2025 – Mar 2025
SQL Developer (SQLD) – Korea Data Agency Jun 2025 – Sep 2025

SKILLS

Programming languages: Python, C/C++, Java, HTML, CSS, SQL (Oracle), Arduino C/C++, JavaScript, LC–3 Assembly
Tools & Libraries: Linux, Flask, Jinja2, PyMongo, TensorFlow, NumPy, Pandas, Git, Xilinx Vivado
Embedded & Hardware: Embedded Systems, Soldering, Circuit Analysis
Languages: Native in Korean, Fluent in English