Hangyul Yi

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EDUCATION

University of Calgary | Schulich School of Engineering, *Bachelor of Science*   2026
Software Engineering   Calgary, AB

EXPERIENCE

Web Developer, *BMERIT*   10/2023 — Present
- Maintained the team's website(https://bmerit.web.app ↗) utilizing skills in **HTML**, **CSS**, and **JavaScript**   Calgary, AB
- Utilized **Firebase** for hosting, authentication, and database management
- Crafted and optimized responsive web layouts using **Figma** for various devices, enhancing user experience and increasing mobile engagement.

Microelectronics Technician, *Escape Hour*   06/2023 — Present
- Completed over 100 electronic assembly projects with high precision   Calgary, AB
- Troubleshot computer interfaces for equipment, resolving technical issues for over 50 systems
- Leveraged **C++**, **Arduino** programming, **Flutter** to integrate interactive features into 20 custom electronic solutions, enhancing the immersive experience for escape room participants

KOR-ENG Translator, *Voithru Inc.*   05/2022 — Present
- Enhanced accuracy in interpreting audio transcripts by 30%, minimizing misinterpretations   Seoul, South Korea
- Ensured quality of 100+ projects with proofreading and syntax review for Multi-Channel Networks(MCN)

Video Timer, *SubUP.io*   06/2021 — 06/2022
- Optimized video localization efforts by processing videos and calibrating subtitles & timestamps with a 0.5-second margin of error, achieving 100% format accuracy   Seoul, South Korea
- Boosted customer satisfaction by 15% through improving translation accuracy

PROJECTS

Flower Image Classifier ↗
- Developed a deep learning image classifier using **PyTorch**, VGG16 architecture and a dataset of 10,000 flower images
- Engineered **Python scripts** with customizable command-line training options via **argparse** module; enabled specification of directories, architecture, hyperparameters, and GPU usage.
- Implemented the **top-K predictions** method to provide the most probable flower classes, enabling users to see a range of potential labels
- Employed **Matplotlib** and **Seaborn** to create informative data visualizations such as bar graphs to display classification results

Handheld Retro Video Game Console
- Programmed a game featuring randomized falling objects using **C++**, **Arduino** technology and the TFT_eSPI header
- Designed a 3D casing for the project using **Fusion360**, resembling a retro arcade machine

Mini Indoor Garden
- Created **Arduino-based autonomous water system** to address specific moisture levels in soil, using **C++**, moisture sensor, and a water pump diminishing manual labor by 90%
- Utilized sustainable and recycled materials to construct a 100% recyclable product

EXTRACURRICULARS

Jr. Vice President Operations, *DeepRacer Calgary*   03/2023 — 04/2024
- Created **AWS DeepRacer** regulation compliant tracks and walls with precise measurements   Calgary, AB
- Streamlined race car resetting process by 25% through implementation of software and digital tools, increasing efficiency in the start line
- Trained racer cars using **AWS DeepRacer** interface and adjusting **hyperparameters** to address simulated-to-real(*sim2real*) performance gaps resulting in 80% better performance in races.

SKILLS

Languages:
C++, Python, HTML/CSS, Java, Swift, C, JavaScript, TypeScript

Technologies/Framework:
PyTorch, React, MJML, Next.js