Hangyul Yi

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EDUCATION

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

- **Relevant Coursework:** *Data Structures and Algorithms, Data Management, Full Stack Web Development, Object-Oriented Principles for Software Development*

SKILLS

Languages: C++, Python, HTML/CSS, JavaScript, TypeScript, Java, Dart, C, Swift
Technologies/Frameworks: Next.js, PyTorch, React, Flask, PostgreSQL, MJML, Node.js, Express, Flutter

EXPERIENCE

Web Developer, *BMERIT* 10/2023 – Present
Calgary, AB

- Maintained the team's website utilizing skills in **HTML**, **CSS**, and **JavaScript**
- 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
Calgary, AB

- Soldered over 50 electronic assembly projects with high precision
- Troubleshot computer interfaces for equipment, resolving technical issues for over 15 systems
- Leveraged **C++**, **Arduino** programming, **Flutter** to integrate interactive features into 20+ custom electronic solutions, enhancing the immersive experience for escape room participants

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

Club Monthly Newsletter

- Used **MJML** to generate responsive HTML newsletter templates for easy viewing on all platforms
- Developed **Python** scripts for automated sending of the newsletter using the **Google Sheets API** to keep a realtime list of recepients

EXTRACURRICULARS

Vice President Operations, *DeepRacer Calgary* 03/2023 – 04/2024
Calgary, AB

- Created **AWS DeepRacer** regulation compliant tracks and walls with precise measurements
- 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.