Junseok Lee

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EDUCATION

McMaster University   **Expected Completion, April 2026**
Bachelor of Engineering in Computer Engineering (CO-OP)   *Hamilton, Ontario*

- Enrolled in **Level 4** of the Computer Engineering (Co-op) program at McMaster University with a cumulative GPA: **3.0/4.0.**
- **Competent Topics**: Logic Design, Digital Signal Processing, Circuits and Waves, Programming, Hardware Design, Web and System Development, Control System, SCADA System

SKILLS

Languages and Software: C, C++, Python, Java, JavaScript, Verilog (FPGA), Bash, HTML/CSS, PSpice, LTSpice, AutoCAD, MySQL, React, Flutter, CODESYS, CAN Protocol, PLC, SCADA System, Graph Interface Designs

Frameworks & Tools: Node.js, Git, GitHub, GitLab, MySQL, Linux, Google Analytics, IntelliJ, RStudio

WORK EXPERIENCE

SROOK *South Korea | Google Analytics, Java, JavaScript, MySQL, HTML/CSS*   **June 2024 - August 2024**

- Developed integrated website reports using **Java** and **JavaScript** for system development and design as **Web and System developer**.
- Managed and retrieved data with **MySQL** to analyze consumer behavior from Google Analytics data and Google Cloud.

Flodraulic *ON, Canada | CODESYS, CAN Protocol, Danfoss Plus +1, AutoCAD, Flutter*   **August 2024 - Current**

- Designed **HMI system** and developed control system and hydraulics related to hydraulics with **CODESYS**, **AutoCAD**, Danfoss +1 Guide and Service tool as a **Control System Engineer.**
- Troubleshooting wireless systems such as transmitter, receiver with **internal logic and cable harness**
- Developed and debugged custom application systems based on client requirements using **Flutter** for app development.

PROJECTS

Hardware Implementation of an Image Decompressor | *Verilog, C*   **December 2023**

- Applied **Color Space Conversion** to transform each pixel to YUV format as the output of the Inverse Discrete Cosine Transform (IDCT), utilizing interpolation through an FIR filter with buffer and four multipliers to create state tables.
- Processed 8x8 pre-IDCT data blocks, writing them back to YUV memory space, determining the addressing for post-IDCT sample storage, and implemented a **Finite State Machine** (FSM) to initiate matrix-based IDCT, achieving 2.3 million computations within a minute.

Pacemaker | *Pacemaker, Python, MATLAB Simulink, Link for the project*   **December 2023**

- Contributed to the design of a Digital Circuit Model (DCM) to simulate the bioelectrical interface between a heartbeat programming application (developed with **Python's Tkinter GUI toolkit**) and a pulse generator, in real-time, using Simulink in MATLAB.
- Defined and programmed the functionality of the pacemaker for each operational mode, incorporating real-time electrogram simulations.

Infrastructure for Self-Driving | *Python, AutoCAD, C*   **December 2022**

- Collaborated within a team of four to design an innovative highway infrastructure using CAD tools and a self-driving system. Optimized cruise control distances for fully autonomous traffic conditions using Python.

Extracurricular activities

Korean Students Association of Canada (KSAC) | *Head Finance of Student Affairs*   **June 2022 - Current**

- Managed all kinds of finance and spearheaded the promotion of various social events geared to creating connections between Canadian Korean engineering students within the Greater Toronto Area.