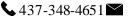
# Junseok Lee









#### **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, , PLC, SCADA System, Graph Interface Designs, Arduino 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 (PLC), 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 me
- mory 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 GitHub

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 realtime, 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, Auto CAD, C

December 2022

Collaborated within a team of four to design an innovative highway infrastructure using CAD tools and a selfdriving 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.

