Junseok Lee

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EDUCATION

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

- Enrolled in **Level 4** of the Computer Engineering (Co-op) at McMaster University with a **cumulative GPA: 3.1/4.0.**
- **Relevant Coursework**: Logic Design, Digital Signal Processing, Circuits and Waves, Programming, Hardware Design, Web and System Development, Control System, SCADA System

SKILLS

- Programming Languages: C, C++, Python, Java, JavaScript, Verilog (FPGA), Bash, HTML/CSS
- Control Systems & Hardware: CODESYS (PLC), SCADA Systems, Arduino, Danfoss Plus+1 Guide & Service Tool, PSpice, LTSpice, AutoCAD, SolidWorks, Electric Circuit Design, Embedded Systems, Hardware Debugging
- Development & Analytics: Git, GitHub, GitLab, Linux

WORK EXPERIENCE

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

- Developed **integrated website reports** using **Java and JavaScript**, optimizing system performance and design.
- Analyzed consumer behavior by managing and retrieving **Google Analytics** data through **MySQL** and **Google Cloud**, improving data-driven decision-making.

Flodraulic | *Georgetown, Canada* | *CODESYS, CAN Protocol, Danfoss Plus+1, AutoCAD, Flutter* **August 2024 - August 2025**

- Designed and implemented HMI system, **integrating control system and hydraulics** using CODESYS, AutoCAD, Danfoss +1 Guide/Service tool (Logic Design tool) as a Control System Engineer**.**
- Diagnosed and resolved **wireless system issues** (transmitters, receivers, internal logic, cable harnesses), **reducing troubleshooting time by 40%**.
- Conducted **hardware diagnostics** and implemented customer-requested program **logic updates onsite** to meet specific functional requirements.
- Developed **custom debugging solutions** tailored to client needs using **Flutter**, improving diagnostic accuracy and **enhancing user experience** for the company's app.
- Managed **data visualization** with **Adobe XD, Illustrator, and Microsoft Excel**, streamlining reporting processes.

PROJECTS

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

- Developed **custom decoding circuitry** to process. **mic17 compressed images**, utilizing **UART for data transfer and SRAM for storage** and applied **Color Space Conversion and Inverse Discrete Cosine Transform (IDCT)** to enhance image quality while optimizing **memory and processing efficiency**.

Pacemaker | *Pacemaker, Python, MATLAB Simulink* *GitHub* **December 2024**

- Designed a **Digital Circuit Model (DCM)** to simulate the bioelectrical interface between a heartbeat programming application (built with **Python Tkinter**) and a pulse generator.
- Programmed the pacemaker's functionality for multiple operational modes and integrated **real-time electrogram simulations** using **MATLAB Simulink**.

Integrated Automation Control System | *Python, Arduino, CAN BUS interface* **May 2025**

- Developed an **Arduino-based control system** at Flodraulic, optimizing **real-time data handling and device operability via CAN bus** with dynamic protocol and baud rate adjustments.
- Engineered a real-time CAN bus system with dynamic protocol selection, improving communication efficiency.
- Achieved an ***80%* reduction** in device testing time through embedded diagnostics and enhanced LED/button feedback.

LEADERSHIP

Korean Students Association of Canada (KSAC) | *Head Finance of Student Affairs* **June 2022 – June 2025**

- Managed event budgets exceeding *$6,000*, coordinating 10+ networking events for Korean engineering students.

Korean Students Association of Canada (KSAC) | Head of IT **June 2022 – Present**

- Maintained KSAC website, ensuring stability and user-friendly design and implemented security measures and supported new feature development. (https://ksaccanada.com/)