Jay Lim

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TECHNICAL SKILLS

- **Back-End:** C, C++, Python, Java, Node.js, REST APIs, MySQL, MariaDB, MongoDB, Supabase, Socket (TCP/UDP/IP) & Multithread Programming
- **DevOps:** Docker, Git, CI/CD, Linux bash/shell scripting, Web Server Configuration, Load Balancing, Virtualization, VMware, Apache, NPM
- **AI & Machine Learning:** Python, TensorFlow, OpenCV, AI Training, Arduino, Image Crawling, 3D Printing
- **Front-End:** React, Next.js, JavaScript, TypeScript, CSS, HTML5, Material-UI
- **Cloud:** AWS, GCP, Firebase

PROFESSIONAL EXPERIENCE

H2O System Technology Co., Ltd. (https://bit.ly/3AbInVj) **Seoul, Korea**
Site Reliability Engineer May. 2022 – Nov. 2022

- Maintained the MCI (Multi Channel Interface) network system managing client access, stock orders, and quote inquiries.
- Developed a shell script analyzing log client access, reducing the search steps from 4 to 1 and search times by 25%; devised load generators to send tpcall to OLTP (Online Transaction Processing) & link clients to the MCI system via TCP connect; analyzed TPS results.
- Developed/tested new transactions requiring personal info inquiries after validating public certificates; solved errors occurred during the GDB testing.

H2O System Technology Co., Ltd. **Seoul, Korea**
Java Backend Engineer Feb. 2022 – Apr. 2022

- Upgraded the Java framework in the middleware to version 8 using Eclipse; tested & debugged the framework.
- Drew a functional processing flow diagram and detailed description documents using MS Office.
- Reduced compilation time by 75% by developing options to compile only edited or added sources and commit them to the SCM (Software Configuration Management) system.

H2O System Technology Co., Ltd. **Seoul, Korea**
Middleware Backend Engineer Jul. 2021 – Jan. 2022

- Established a Commodity Trading HTS platform for business owners using C, JavaScript, and MySQL.
- Formulated an HTS UI/UX to use JavaScript with the company's own internal software coded in C++.
- Developed transaction services that declared database I/O and queries using C.
- Formed tables in MariaDB using MySQL Workbench and inserted data information such as client users, products, addresses.
- Created and inserted queries into transaction services for the operating system; reduced query times to find addresses; from 9 seconds to <1 second.

EDUCATION

Humber College **Toronto, Canada**
Diploma of Computer Systems Technician Jan. 2024 – Sept. 2025

Hansung University **Seoul, Korea**
Bachelor of IT Convergence Engineering – Major in Artificial Intelligent Systems Mar. 2015 – Feb. 2022

TECHNICAL PROJECTS

Humber College **Toronto, Canada**
Hypervisor Virtualized Network Project May. 2024 – Sept. 2024

- Configured and managed multiple virtual machines using VMware Workstation for network routing and web hosting.
- Deployed websites with Apache and NGINX on Ubuntu, improving network access and system performance.
- Implemented network routing on a Windows Server VM, optimizing communication between virtual machines and internet access.

Pacemaker **Toronto, Canada**
Building Up ERP System Project Sept. 2023 – Mar. 2024

- Developed a customized ERP system to enhance data visualization and collaboration for a non-profit using React, Next.js, and TypeScript.
- Designed and implemented scalable REST APIs and backend architecture using Supabase for real-time data access.
- Deployed key frontend features, including a Sign-In form and an admin dashboard, to optimize user experience and system usability with MUI.

Hansung University **Seoul, Korea**
Senior Engineering Capstone Project Mar. 2021 – Jun. 2021

- Created a smart farming system to auto detect ripened cherry tomatoes and harvest them with a robotic.
- Crawled cherry tomato images, labelling them through JavaScript and Python code programming.
- Imported TensorFlow and OpenCV using Python to train the AI module through a webcam.
- Constructed Python code by importing Pyfirmata that controlled Arduino in a Windows environment.

Hansung Engineering Competition Contest Jul. 2019 – Sept. 2019

- Using an AI module and 3D printer, trained a vehicle to collect and dispose empty aluminum cans.
- Took 20 hours using a webcam and joystick to train the vehicle to automatically pick up and dispose the cans.