**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**

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

* 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.

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

* 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.

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

* 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**

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

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

**TECHNICAL PROJECTS**

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

* 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.

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

* 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.

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

* 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.

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| *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.