

# Junseok Oh

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## Education

### University of Waterloo

Sep 2020 - Dec 2024

Bachelor of Mathematics, Information Technology Management

- President's **Scholarship** of Distinction (\$2000)

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## Skills

- **Languages:** C, C++, Python, Bash, Assembly, JavaScript, HTML, CSS, R
- **Environments:** Linux, AWS, Node.js, Express.js, React.js, jQuery, MySQL, PostgreSQL
- **Tools:** Visual Studio, Git, REST, APIs | security frameworks, SIEM, IDS, packet sniffers

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## Personal Projects

### AntQuAnt | Stock Automated Trading System

Oct 2023 – Present

Python, Git, MySQL, AWS, APIs, HTML

- Designed and set up the development environment by applying the securities firm **web API** and managed the database structure using **MySQL** from **AWS**.
- Leveraged **web crawling** techniques to systematically gather relevant information and conducted real-time trading with **quantitative** investment strategies.
- Real-time trading data prediction accuracy was increased by **20%**, securing **3rd** place in a simulated investment competition in Korea.

### Chess-Game | Object-Oriented Software Development

Nov 2022 – Jan 2023

Linux, C++, Git, Architectures

- Designed a chess engine (**UML**) integrating with a graphical user interface (GUI) using **C++** programming and **algorithms**.
- Executed test suits for unit testing in shell environments using **Bash** and updated code by **Make**.
- Adopted the knowledge of inheritance and **design patterns** (observer, decorator, factory, and template).

### FTZ | System Attack Simulation and Analysis

Jul 2022 – Oct 2022

Cyber Security, Linux, Assembly, Python, Git

- Built a local server FTZ and utilized **BOF** and **FSB** attack techniques, creating a local lightweight **shell code**.
- Analyzed source code through reversing used **gdb**, **IDAPro** and **x64dbg** and the principles of **backdoors**.
- Participated in the **CTF competitions**, placed in 9<sup>th</sup> UW CTF.

### Predictive Analytics for Securities Firm | A Comprehensive Approach

Dec 2021 – Feb 2022

Machine Learning Methodology

- Conducted an analysis of financial ratio data from KOSDAQ Market's Stock companies in the Korea Exchange Information Data System to ultimately empower investors' information rights.