

# Gary Huang

[g47huang@uwaterloo.ca](mailto:g47huang@uwaterloo.ca) | [github.com/garyhhj](https://github.com/garyhhj) | [www.garyhuang.ca](http://www.garyhuang.ca)

## EDUCATION

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### University of Waterloo

*Bachelor of Software Engineering, Honours (BSE)*

Waterloo, ON

*Sept 2021 – April 2026*

**Relevant Courses:** Operating Systems, Data Structures and Algorithms, Object Oriented Programming, Databases, Networking

## EXPERIENCE

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### GTS (Global Trading Systems)

Jan 2025 – Aug 2025

*Python Developer Intern*

### QTG Capital Management

May 2024 – Aug 2024

*Software Engineer Intern*

- Created a stock market backtester in Python. Designed and tested a proprietary stock strategy on Shanghai Stock Exchange stocks, achieving a sharpe of **2.97**
- Preprocessed Level 3 (L3) high-frequency trading data by integrating execution flow and order flow into a detailed order book, improving backtesting accuracy
- Developed a web scraper using **Selenium** to extract live news updates, facilitating real-time delivery of news to company chat for informed decision-making

### Ford

Sept 2023 – Dec 2023

*Software Engineer Intern*

- Enhanced system responsiveness by **125%** through C++ code optimization within the node addon codebase, enabling the use of low cost hardware for Ford EV infotainment systems
- Implemented **dynamic arrays** and thread-safe **maps** using the **iterator pattern** and **mutexes** to enhance code reusability and eliminate data coherency issues
- Cached style values resulting in a **30%** reduction in the frequency of IPC messages transmitted

### Genellipse

May 2022 – Aug 2022

*Data Scientist Intern*

- Automated insurance claim form extraction by prototyping a solution using **PyTorch** and **OpenCV**, which later evolved into a full-scale project
- Employed **OpenCV** for preprocessing legacy insurance claim forms, reducing noise and allowing **BERT** machine learning model to interpret client information with **98%** accuracy
- Developed core information requesting server to automate client's annuity claims using Python, deployed on **AWS Lambda** and **MySQL** server

## PROJECTS

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### Chess Engine | C++

<https://github.com/garyhhj/chess-engine-v2>

- Built a chess engine with **minimax algorithm** and **alpha-beta pruning** to increase search depth in the decision tree by **2.5** times
- Boosted chess.com account to over **1500** elo with over **90%** win rate before getting banned

### Pathfinding Visualizer | JavaScript, HTML/CSS

<https://github.com/garyhhj/pathfinding-visualizer>

## TECHNICAL SKILLS

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**Languages:** C++, Python, JavaScript, TypeScript, HTML/CSS, SQL

**Tools:** OpenCV, Selenium, Pytorch, SDL2, AWS, MySQL, Valgrind, Git