

# RICKY HUANG

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## EDUCATION

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BCS, University of Waterloo, Computer Science

Sep 2022 - Apr 2026 Expected

GPA: 3.86/4.00 — Term Distinction in all terms

**Relevant Coursework:** Object-Oriented Development (Advanced), Probability (Advanced), Assemblers and Compilers (Advanced), Data Structures, Algorithm Design, Calculus 1 & 2, Linear Algebra 1 & 2, Optimization,

**SAT:** 1570/1600 (800 Math; 770 Evidenced-Based Reading and Writing)

**Online Course:** Fundamental Cloud Concepts for AWS, Understanding AWS Core Services

## SKILLS

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**Programming Languages** C, C++, Python, JavaScript, Scala, SQL

**Frameworks/Libraries** PyTorch, React, Svelte

## EXPERIENCE

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**Software Engineer Intern**

May 2024 - Apr 2024

RiskMind AI

*Waterloo, Ontario*

- Digitalized insurance application forms by reconstructing OCR data from Amazon Textract into interactable HTML pages, reducing average time spent filling out an application package from **12 minutes to 5 minutes (58% decrease)**.
- Developed a dynamic dashboard using React for clients to review accuracy of machine-learning models, reducing average time spent per review from **80 seconds to 25 seconds (69% decrease)**.

**Machine Learning Engineering Intern**

Jan 2024 - Apr 2024

H2O Geomatics

*Waterloo, Ontario*

- Developed and deployed video inpainting models from scratch for spatial and temporal gap-filling of large satellite image datasets which removed **99% of cloud cover**. [Whitepaper](#).
- Replaced existing RNNs with transformers for deep learning with geospatial datasets which **increased accuracy by over 300%**.
- Optimized data pipelines and parallelized training and testing loops across multiple GPUs which reduced training and testing times by **95%**.

**Backend Software Engineering Intern**

May 2023 - Aug 2023

ByteDance

*Remote*

- Developed backend of messaging service in Java with SpringBoot using MySQL database to hold user data, content. Used MyBatis framework to handle interactions with REST APIs.
- Refactored existing code to incorporate design patterns such as dependency inversion to prioritize adaptability, maintainability, and scalability.
- Implemented caching and concurrency capabilities to efficiently handle simultaneous CRUD calls.

## PROJECTS, COMPETITIONS

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**NLP Degree Planner.** 1st place out of 248 teams for “Best Use of Cohere” challenge at Hack the North, winning \$2000. Reduced loading time from 17 minutes to 15 seconds (99% decrease) by reducing API calls by 99%.

**Reinforcement Learning FPS Agent.** Currently working on a university team project creating a reinforcement learning agent to play the 1993 first-person shooter Doom.

**Caitlyn 3D Ray-Tracer.** 3D graphics ray-tracing built in C++ and using CUDA that generates scenes with realistic lighting reflections, scattering, and motion blur. Worked with multiple developers.

## LEADERSHIP, ACHIEVEMENTS, EXTRA-CURRICULAR ACTIVITIES

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- Computer Science Club, Pure Math Club, Poker Club
- High School Student Council President
- 99th percentile in BCSS, Math Challengers, CEMC Gauss math competitions