RICKY HUANG

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EDUCATION

BCS, University of Waterloo, Computer Science — Sep 2022 - Aug 2026 Expected
GPA: 3.86/4.00 — Term Distinction in all terms
Relevant Coursework: Linear Algebra 1 & 2, Optimization, Object-Oriented Development (Advanced), Probability (Advanced), Algorithm Design and Data Abstraction, Calculus 1 & 2
SAT: 1570/1600 (800 Math; 770 Evidenced-Based Reading and Writing)
Online Course: Fundamental Cloud Concepts for AWS, Understanding AWS Core Services

SKILLS

Software C/C++, Python, PyTorch, TensorFlow, JavaScript, Java, Docker, Linux, SQL, React
Languages English, Mandarin Chinese, Cantonese Chinese

EXPERIENCE

Software Engineer Intern — May 2024 - Present
RiskMind AI — *Waterloo, Ontario*

- Developed a dynamic and user-friendly dashboard using **ReactJS** for clients to review accuracy of machine-learning models, reducing average time spent per review from **80 seconds to 25 seconds (69% decrease)**.
- 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)**.

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.
- implemented CNNs, GANs, RNNs, Transformers for deep learning with geospatial datasets.
- 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

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

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