

Rongqi(Richard) Fan

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SUMMARY

3rd-year Computer Science student with 4+ years of programming experience. Interested in all aspects of the technology industry with a focus on Artificial Intelligence and its applications. Seeking 2023 Winter, and Summer internship positions to leverage my skills and experience to implement robust software products.

EDUCATION

Bachelor of Computer Science

University of Waterloo • Waterloo, ON, 2020-2025

SKILLS

Technologies: Django, Flask, Vue.js, Android Studio, Tensorflow, Numpy, Pandas, Jupyter Notebook, Linux, Git.

Languages: C, C++, Python, Java, JavaScript, HTML, CSS, SQL, Racket, R, YANG, Bash.

COURSEWORK

Operating Systems, Data Structures, Algorithms, Compiler, Database, Object-Oriented Programming, Linear Algebra, Multi-Variable Calculus, Functional Programming, Probability, Statistics, Optimization, C++ Design Patterns.

EXPERIENCE

Software Engineer Intern

Huawei Technologies

May 2022 – August 2022, Markham, ON

- Designed the interfaces of a computer network system configuration management software that allows fast CRUD operations (~20 times faster than that of the competing product).
- Refactored all unit tests with C++ templates, and vectors following object-oriented programming principles and YANG standards.
- Multi-OS support (Linux, windows, and qemu).

PROJECTS

AlphaZero - Gomoku

September 2021 – December 2021

- Implemented a modified version of AlphaZero (an AI algorithm used to train board game players solely based on self-play) for Gomoku.
- Achieved competitive performance after ~2 hrs of training using Tensorflow on a laptop.
- Created a user interface using Vue.js with Flask as the backend (REST API).
- Employed reinforcement learning principles with Monte Carlo Tree Search as a policy improver.

Machine Learning

September 2021 – January 2022

- Implemented basic linear models such as logistic regression and linear regression with gradient descent using Numpy, and Tensorflow.
- Trained various versions of Convolution Neural Networks with different architectures (variations of VGG-16) to test the effect of dropout.
- Achieved state-of-art 90%+ accuracy on cifar-10 with less than 1 hr of training using TensorFlow on a laptop.
- Implemented tree-based machine learning algorithms Random Forest and Gradient Boosting Tree in Python using Numpy.

Personal Website

September 2021 – October 2021

- Developed a website displaying personal projects, and blogs using HTML, CSS, JavaScript, and Django.
- Multi-language Support.
- Used default SQLite database through Django models.

CERTIFICATIONS

Old Boy's Medal in Mathematics

St. Andrew's College (High School) • 2020

Awarded to the Top Math Student of the Graduating Class. Highest average in senior year math courses: AP Calculus, and Statistics.