

Jiafeng (Jayden) Yu

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TECHNICAL SKILLS

Languages: Python, C/C++, Rust, Lisp (Racket-lang), Bash, Lua, JavaScript, HTML/CSS, KDB/SQL, Java, MIPS/ARM Assembly, R

Frameworks/Tools: PyTorch, TensorFlow, NumPy, Pandas, Arch Linux, Vim, Git, FreeBSD, Compilers (LLVM), AWS, Jira, Node.js, Vue.js

Interested in: OCaml, Automated Theorem Proving, Quantum Computing, Penetration Testing, Gentoo/BlackArch Linux

Communication: English, French, Mandarin Chinese, Spanish

EXPERIENCE

Ledn Inc

Toronto, ON

Quantitative Developer Intern | Rust, Python

Sept 2022 - Dec 2022

- Designed and engineered a multi-threaded market data consolidator in **Rust** to decrease latency **by over 50%**
- Participated actively in the design and implementation of a **machine learning** based quantitative trading product in **Python** and **Rust**, through researching various limit order models, efficient documentation, and code reviews
- Analyzed cryptocurrencies market trends to produce market microstructure reports using **KDB** and **SQL**
- Managed an **AWS EC2** instance to source modeling data and host a KX Developer environment
- Researched and tested the implementation of a **LSTM** and **Convolutional Neural Network** in **PyTorch**

University of Waterloo

Waterloo, ON

Undergraduate Research Assistant | C

Jan 2023 - May 2023

- Researched **FreeBSD kernel** performance optimization using **static** and **dynamic analysis**
- Decompiled binaries to minimize cache misses by automating **code refactoring** using Ghidra
- Implemented the testing framework and **performance tested** HHVM, DaCapo, and Renaissance applications
- Read, summarized, and presented various academic and industry systems **research papers**

Ford Motor Company

Waterloo, ON

Software Engineer Intern | Python, JavaScript

Jan 2022 - April 2022

- Implemented the **Full Stack Development** of a performance metrics website in **JavaScript**
- Engineered **Python** scripts to automate updates to the **data processing pipeline** via JSON file management

SS&C Technologies

Toronto, ON

Full Stack Developer Intern | Java, JavaScript

May 2021 - Sept 2021

- Implemented modules of a **Java** based **Selenium** testing framework from scratch
- Designed and implemented **frontend** components of a revamped legacy product using **Vue.js**

EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Mathematics in Honours Computer Science, minor in Pure Mathematics

Sep 2020 - May 2025E

- Relevant Coursework:** Machine Learning, Artificial Intelligence, Computer Vision, Operating Systems, Algorithms, Data Structures, Numerical Computation, Object Oriented Programming, Compiler Construction, Theory of Computing, Computer Architecture and Design, Abstract Algebra, Real Analysis

COMMUNITY

University of Waterloo Computer Science Club

Waterloo, ON

Systems Administrator

Mar 2023 - Aug 2023

- Managed CS Club services and helped maintained uWaterloo's tier 1 **Arch Linux** mirrors
- Helped allocate server space and host websites for other student clubs

PROJECTS

Immune System Invaders | *JavaScript, HTML, CSS*

Mar 2020

Created a web based implementation of the Space Invaders game with a COVID-19 twist in standard

JavaScript, HTML, CSS with **OOP** principles and scalability in mind. [Link to game](#)