

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

Interested in: OCaml, Automated Theorem Proving, Penetration Testing, Gentoo and BlackArch Linux, Go(lang)

Communication: English, French, Mandarin Chinese, Spanish

EXPERIENCE

University of Waterloo

Waterloo, ON

Undergraduate Research Assistant

Jan 2023 - Ongoing

- Researching FreeBSD kernel performance optimization using static and dynamic analysis
- Researching conditional, coalescent instruction prefetching and continuous profiling
- Decompile 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

Ledn Inc

Toronto, ON

Quantitative Developer Intern

Sept 2022 - Dec 2022

- Researched, analyzed, and produced cryptocurrencies market microstructure reports from historical market data using KDB and SQL
- Designed and engineered a multi-threaded market data consolidator in Rust to decrease latency by over 50%
- Actively participated in the design of a high frequency quantitative trading Minimum Viable Product, through researching various limit order models, efficient documentation, and code reviews
- Helped manage an AWS EC2 instance to source modeling data and host a KX Developer environment
- Researched and tested the implementation of a LSTM and Neural Network model for low latency decision making

Ford Motor Company

Waterloo, ON

Software Engineer Intern

Jan 2022 - April 2022

- Implemented the Full Stack Development for a performance metrics website following Agile Development
- Engineered JavaScript and Python scripts to create and modify JSON files for data processing

SS&C Technologies

Toronto, ON

Full Stack Developer Intern

May 2021 - Sept 2021

- Participated in the development a Java based Selenium testing framework from scratch
- Implemented frontend components of a revamped legacy product using Vue.js

EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Mathematics, Major in Honours Computer Science, Minor in Mathematics

Sep 2020 - May 2025E

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

COMMUNITY

University of Waterloo Computer Science Club

Waterloo, ON

Systems Administrator

March 2023 - Ongoing

- 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*

March 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](#)