Jiafeng (Jayden) Yu

438-939-9688 | jf2yu@uwaterloo.ca | GitHub | LinkedIn | Website

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

University of Waterloo — Waterloo, ON
Undergraduate Research Assistant | C — *Jan 2023 - May 2023*
- Researched FreeBSD kernel performance optimization using static and dynamic analysis
- Researched conditional, coalescent instruction prefetching and continuous profiling
- 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

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 Neural Network model for low latency decision making

Ford Motor Company — Waterloo, ON
Software Engineer Intern | Python, JavaScript — *Jan 2022 - April 2022*
- Implemented the Full Stack Development for a performance metrics website following Agile Development
- Engineered Python scripts to automate the creation and modifications of JSON data processing files

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 — *March 2023 - August 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* — 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