

WORK EXPERIENCE

- **Citi** New York, NY
Software Engineer AVP *June 2023 - Present*
Software Engineer Contract *May 2022 - May 2023*
 - **Risk Analytics Products:** Quant Risk Libraries / Wholesale Forecasting Platform
 - **Technologies:** NumPy, pandas, Dask, GraphBLAS, ClickHouse, MySQL
- **Oanda** Toronto, ON
Software Developer Intern *May 2020 - August 2021*
 - **Backend trading systems:** C++ and Python microservices development
 - **Technologies:** Ansible, Protobuf, ZeroMQ, Prometheus/Grafana, QuickFIX, Finagle

EDUCATION

- **University of Toronto** Toronto, ON
Computer Science Specialist and Applied Statistics Minor *September 2018 - April 2023*
 - **Honours Bachelor of Science with High Distinction:** 3.85/4.00 CGPA
 - **University of Toronto Scholar**
 - **2019, 2020, 2022, and 2023 Dean's List Scholar**

INVOLVEMENTS

- **Imglabs.io** Toronto, ON
Co-Founder *April 2022 - Present*
 - **Edge-capable image proxy service:** Proxy, cache, and transform images at the network edge
 - **Image processing in WebAssembly:** Sub-second image transformations in memory-constrained environments
 - **Serverless architecture:** Cost conscious and effortless scaling
 - **Currently in beta:** Free to try out; paid plan available for production customers
 - **Technologies:** Rust, WebAssembly, Cloudflare Workers, AWS, Supabase, PostgreSQL

PROJECTS

- **Dsfs** ([darenliang/dsfs](#)): A highly-experimental filesystem in userspace using FUSE with an exotic backend
 - **Exotic backend:** Files, folders, and transactions are stored using Discord attachments
 - **Append-only log-structured filesystem:** Supports automatic snapshots and rollback
 - **Realtime synchronization:** Syncing files and folders between remote clients in realtime
 - **Performance optimizations:** A variety of techniques are used such as buffering and checksums to ensure there are no unnecessary uploads/downloads and the differences between local and remote states are minimal
 - **Cross-platform support:** Supports major OSes such as Windows, macOS, and Linux
 - **Additional information:** <https://www.darenliang.com/posts/fuseing-for-fun/>
- **Nikel API** ([nikel-api/nikel](#)): Free and open data API for the University of Toronto
- **MikuBot** ([darenliang/MikuBot](#)): General purpose Discord bot serving more than 9,000 servers (discontinued)
- **Quteman** ([darenliang/quteman](#)): A simple Postman alternative written in C++ and Qt
- **Resauce** ([darenliang/resauce](#)): A work-in-progress file rename utility written in C++ and Qt
- **Mal-api** ([darenliang/mal-api](#)): Python library for querying data from MyAnimeList

SKILLS

- **Languages:** Python, Go, C/C++, Rust, JavaScript/TypeScript, Java, Scala
- **Assessments:** CodeSignal: 842/850