# Daren Liang
https://www.darenliang.com

✉ daren@darenliang.com
✉ darenliang@outlook.com
📞 647-881-5291
 darenliang
in darenliang

## Work Experience

- **Citi** — New York, NY
  *AVP* — *July 2023 - Present*
  *Contract* — *May 2022 - July 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
  - **Technologies**: Rust, JavaScript/TypeScript, WebAssembly, React, Tailwind CSS, Next.js, Cloudflare Workers Platform, AWS S3, ClickHouse, Grafana, Supabase, GoTrue, PostgreSQL, PostgREST, Docker, Stripe

## 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