Daren Liang
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 darenliang
in darenliang

EXPERIENCE

- **Oanda**
  Software Developer Intern   *May 2020 - August 2021*
    - **Forex and CFD Trading Systems**: C++ and Python microservices development

EDUCATION

- **University of Toronto**
  Computer Science Specialist   *Sep. 2018 – Apr. 2023*
    - **University of Toronto Scholar**
    - **2018-2020 Dean's List Scholar**

PROGRAMMING SKILLS

- **Languages**: Go, C/C++, Python, JavaScript/TypeScript, Java, Scala, SQL
- **Technologies/Tools**: AWS, Docker, React.js, Vue.js, Qt

PROJECTS

- **Nikel API**: Free and open data API for the University of Toronto.
    - **RESTful API**: Using the Gin Go web framework.
    - **Selenium WebDriver and BeautifulSoup**: Web scraping and data parsing.
    - **Caching**: Requests are cached and stored in a key-value database backed by BadgerDB.

- **MikuBot**: General purpose Discord bot serving more than 5,000 servers.
    - **Amazon DynamoDB**: Database for backing up server data.
    - **Docker**: Ready to deploy Docker image.

- **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/`

- **Decentralized Text Chat Web App**: Peer to peer text chat using WebRTC.
- **Quteman**: A simple Postman alternative written in Qt.
- **Resauce**: A work-in-progress file rename utility written in Qt. Developed with a team of two.
- **Gomatheval**: Evaluates basic math expressions in Go using Shunting Yard and Reverse Polish.
- **Mal-api**: Python library for querying data from MyAnimeList
- **TicTacToe Engine**: Implemented in Rust using a minimax algorithm.
- **Jikan-go**: Go wrapper for Jikan API.

INVOLVEMENTS

- **UTM Robotics**: utmrobotics.com   (currently archived)
    - **Lead Web Developer**: Worked on website redesign. Website built with Jekyll.