

# Eugene Lu

SOFTWARE ENGINEER · FULL STACK DEVELOPER

☎ (+1) 778-885-5228 | ✉ e6lu@uwaterloo.ca | 🏠 yenfu1.github.io | 📧 yenfu1 | 🌐 eugene-lu1

## Skills

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- **Languages:** Go, Python, SQL, JavaScript/TypeScript, HTML/CSS, C++, C, Java
- **Tech Stack:** React/React Native, Redux, Node, Django, Flask
- **Databases:** PostgreSQL, MySQL, Redis, MongoDB
- **Technical Skills:** Source Control(Git), GitHub Actions, Docker, Vagrant, AWS(S3)

## Experience

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### Alida

Remote

#### SOFTWARE ENGINEER

Jan 2022 - Apr 2022 | Sep 2020 - Aug 2021

- Led the design and implementation of single sign-on functionality in Alida's mobile app using **OAuth 2.0** authorization code flow
- Reduced response times of frequently-called API endpoints from 10s to 1.5s by caching external data in **Redis**
- Fixed testing infrastructure by migrating from **GoCD** to **GitHub Actions** and mocking out backend services to be unit-testable, increasing test coverage by 140%
- Pushed for a frontend refactor during a UI overhaul by using **Redux** to manage global states and writing reusable components, improving code quality and maintainability
- Created a service which uploaded user analytics to **S3** and sent a download link via email using **Go**

### University of Waterloo

Waterloo, ON

#### WEB APPLICATION DEVELOPER

Jan 2020 - Apr 2020

- Created a calendar view for comparing course timetables using **Python** and **PostgreSQL** which students use to schedule classes
- Lowered load times for large queries from over 30s to 4s by optimizing **SQL** queries and paginating the results
- Automated local deployment of a web app using **bash scripts** and **Vagrant**, reducing setup time by 30%

### University of Waterloo

Waterloo, ON

#### TEACHING ASSISTANT

Sep 2018 - Dec 2018

- Held office hours and tutorials to enrich students' understanding of fundamental programming concepts
- Optimized the automated grading framework by **multi-threading** the test cases whenever possible, increasing efficiency by 4 times

### Pelmorex Media

Oakville, ON

#### QUALITY ASSURANCE DEVELOPER

Jan 2018 - Apr 2018

- Pair-programmed with other developers to implement a news feed using **Swift** and **Objective-C**
- Improved test coverage by 20% by writing automated UI tests using **XCTest**
- Confirmed the integrity of The Weather Network iOS app by performing sanity tests before each release

## Education

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### Candidate for Bachelor of Computer Engineering, Co-op

Waterloo, ON

#### RELEVANT COURSES

Sep 2017 - Jun 2023 (Anticipated)

- ECE457A - Cooperative and Adaptive Algorithms
- ECE250 - Data Structures and Algorithms

## Projects

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### SC2Ladder

sc2ladder.herokuapp.com

#### PYTHON, DJANGO, HTML, CSS, REDIS, POSTGRES SQL, HEROKU

- Built a search engine for StarCraft II players that provided detailed analytics such as a player's performance over time

### Election Insights

#### PYTHON, MYSQL

- Designed a BCNF database for 2020 US election results collected from Kaggle and a complementary CLI which provided statistics such as how poverty rates affected a county's voting results