ERIC LIU

Computer Science Undergraduate | Seeking Software Engineering Internships

@ e48liu@uwaterloo.ca   📞 647-669-6949   🔗 eric-g-liu.me   in linkedin.com/in/eric-g-liu   ⌂ github.com/eric574

LANGUAGES

C++   C   Java   C#   Python   HTML/CSS/JS   SQL   Ruby   Go

TECHNOLOGIES

React   Angular   Vue   Docker   TensorFlow   Flask   Express   Node   Git   Jenkins   MongoDB   AWS   Django   Postgres   Google Cloud

EXPERIENCE

Software Engineer
Moralyzer

📅 July 2020 – Present   📍 Waterloo, ON

- Developed **RNN + LSTM** models to filter out offensive and irrelevant comments using **Keras**, **TensorFlow**, **CuDNNGRU**, and **Word2Vec**
- Built several **API** integrations using **React**, **Ruby on Rails**, and **REST** design
- Designed an **ETL pipeline** to collect and monitor data from user posts

Software Development Engineer (Test)
Wish (ContextLogic)

📅 May 2020 – Aug. 2020   📍 San Francisco, California

- Automated **50%** of daily **API**, **Web**, and **iOS** test suites with **Python**, **JavaScript**, and **Swift**
- Migrated functional tests into **CI/CD pipelines** using **Docker** and **GitLab** to save **93%** of daily testing time
- Implemented a new pattern matching algorithm for fraud merchant transaction detection, saving **$2 million USD in GMV** annually

Director of Technology & Senior Software Engineer
WeBuild

📅 April 2020 - Present   📍 Waterloo, ON

- Built the company's robust website and oversaw the **architecture** and **design** of **full-stack** applications using **MERN** stack, **Prometheus**, and **Kubernetes**
- Worked closely with clients to gather imperative **design approval** and ensure systems designed are **scalable**, **reusable**, and **service-oriented**
- Increased company growth by **52%** for clients via **SEO**, **copywriting**, and **API integrations**

Software Engineer
Synapse Data Solutions

📅 Dec. 2018 – June 2019   📍 Richmond Hill, ON

- Wrote **Python web-scraping** scripts to increase database entries by **32%** along with documentation in **Linux** and **Bash** environments
- Performed **data cleansing and mining** on database entries reducing lookup times by **38%** and false positive matches by **61%**

EDUCATION

Candidate for Bachelor's of Computer Science
University of Waterloo

📅 Sept. 2019 – Present

Relevant Coursework: Algorithm Design and Data Abstraction, Object-Oriented Programming, Logic and Computation, Foundations of Sequential Programs

Online Courses: Algorithms Part I (Princeton), Machine Learning (Stanford), Financial Markets (Yale)

PROJECTS

Optimization Library
Mathematical Optimization Library in C++

- Implemented **graph-theory algorithms** to solve linear, integer, and convex programs
- Built an user-friendly interface via **Python bindings** and a symbolic math library (**SymPy**)
- Supports applications such as: **traveling salesman** art, traditional **machine learning**

Instagram Graph APIs
Leveraging Instagram's Graph APIs for research

- Implemented multiple REST API endpoints including **GET, POST, DELETE** requests
- Architected a **tokenization system** for **login, authentication, authorization**
- Built with **Node, Express**, Facebook Graph API

Table App
Restaurant Collaborative Filtering Recommender System

- Web and Android app built using **Django**, **PostgreSQL**, **Kotlin**, **Firebase**, **scikit-learn**, **NLP**, **KNN**, a **CNN**, and **Yelp API**
- Achieved an accuracy of **68.4%** on validation sets using **matrix factorization** and **stochastic gradient descent**

DevSpace
Social Media Platform for Developers

- Full-stack **MERN** app connecting countless of developers together using **Redux**
- Allows **users** to **manage** their **profiles**, **post**, **comment on**, and **like messages** in their **feed**

AWARDS

Facebook Hacker Cup 2020
98th percentile worldwide in Qualifying Round

Terminal hosted by Correlation One
Placed 7th/25,972 players (1st in Canada)

Google Code Jam 2020
97th percentile worldwide in Qualifying Round

LeetCode
Top 3% of contestants worldwide in July 2019

Google Code Jam 2019
95th percentile of contestants worldwide in Qualifying Round

USA Computing Olympiad - Platinum
Top 20% of contestants worldwide