

ERIC LIU

Computer Science Undergraduate | Seeking Winter 2021 Software Internships

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LANGUAGES

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

TECHNOLOGIES

React Angular Vue Docker TensorFlow Flask Express Node
Git Azure 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**, **CuDNN**, 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
- Proposed 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 and **cloud deployment** services
- 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**

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

ImgCleaner

Using AI to Clean and Denoise Images

- Created **Flask** web app that cleans unclear and messy images using **Custom U-Net Architecture** and **Pytorch**
- Based on image restoration **machine learning** research papers

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