Felix Zhou

Computer Science | Combinatorics and Optimization
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Fluent with C, C++, Python, TypeScript, NodeJS, Git, React
Proficient in Java, PostgreSQL, Flask, Scikit-Learn, XGBoost, TensorFlow, Keras
Familiar with Haskell, Scheme, SQLAlchemy, Unit Testing

HACKATHONS:

YHacks – Emotion Recognition Web Application   2018
- Leveraged a **Deep Neural Network** to classify speech in one of five emotional classes with 80% Accuracy through **Python**
- Implemented the application with full-stack technology including **HTML**, **CSS**, **JavaScript,** and **NodeJS** framework
- Launched the application via **EC2** on a **CentOS** server

Hack Princeton – Sales and Trading Bot   2017
- Created an automated equity trading bot through the **NodeJS** framework
- Implemented Facebook Messenger-based GUI using the **Azure** platform
- Incorporated an existing **RESTful API** to capture real-time stock market fluctuations

PROJECTS:

Goose Or Not   2018
- Lead a team of 4 in designing and implementing a loosely-coupled full-stack application linked through **RESTful API**
- Implemented a **Flask** backend, a **Typescript-React** web application, and a **React-Native** mobile application
- Leveraged **Decision Trees** and **Boosting** to develop an image classifier which recognizes geese with 90% accuracy
- Deployed through **Heroku** while incorporating **PgBouncer** and employing **NGINX** as a load balancers for performance

SIMP   2018
- Employed the **Haskell** language to create a dynamically-typed, interpreted, imperative programming language
- Actualized both the parser and interpreter through **Pattern-Matching**
- Implemented a garbage collector to free unreachable memory

LEADERSHIP:

Associate, Sysadmin | hEDGE Financial Conference   2017-2018
- Planned for guest speakers, workshops, mock interviews, case competitions, and networking sessions
- Maintained the conference website, server, and database for applications and more
- Developed professional communication skills through contacting potential sponsors for partnership opportunities

WORK EXPERIENCE:

Full Stack Developer | Encircle Inc.   2018-2018
- Full-Stack web development with **Python, Tornado**, **TypeScript, CoffeeScript, React,** and **React-Native**
- Implemented in-app email sending function through the **Model-Daemon** method
- Participated in weekly **Sprint** meetings within an **Agile Scrum** framework

Mathematics Teaching Assistant | Kumon Education   2016-2017
- Clarified confusing topics for individual students ranging from basic Arithmetic to introductory Calculus
- Improved communication skills by providing feedback to students aimed to aid their progression in math

EDUCATION:

University of Waterloo
- Candidate for Bachelor's Degree in Computer Science, 2022
- Candidate for Bachelor's Degree in Combinatorics and Optimization, 2022
- 3.97 GPA
- Object-Oriented Programming, Data Structures, Statistics, Calculus III, Linear Algebra II, Quantum Information Processing
- President's Scholarship of Distinction *for an entrance average above 95%*

ADDITIONAL INFORMATION:

Awards
- Dean's Honors List *for Fall, Winter terms*   2017-2018
- Advanced Placement International Diploma *for achieving a score of 5 in nine AP exams*   2017
- Physics Student of the Year *for highest accumulative average and performance in UBC Physics Olympics*   2016, 2017
- Winner of Tournament of Towns Mathematics Contest *for a perfect score in the competition*   2016

Languages
- Native proficiency in **Mandarin**
- Professional working proficiency in **French**