FELIX ZHOU

Engineer & Mathemagician working with tranformation, analysis, and storage of structured and unstructured data

@ felix990302@yahoo.ca 📞 226-898-5226 🔗 zhou-felix.me in linkedin.com/in/felix990302 github.com/felix990302

EXPERIENCE

Software Engineering Intern
Encircle Inc.

📅 April 2018 – August 2018   📍 Kitchener, ON

- Full-Stack web development with **Python**, **Tornado**, **TypeScript**, and **React**
- Implemented email feature to send reports through **Model-Daemon Method**
- Improved user experience with **lazy loading** and **functional input state**

PROJECTS

VM
CS246E: Objected Oriented Programming (Advanced)

📅 November 2018

- Designed and actualized a C++14 clone of the command-line text editor
- Followed **Object-Oriented Principles** and **Design Patterns** like **Decorator** and **Visitor** to produce modular and extensible code
- Implemented undos and redos through the **Command** design pattern

Goose or Not
Hack the North

📅 September 2018

- Created an **Online Learning** application which recognizes geese
- Designed a **PostgreSQL** database with **ORM** to improve extensibility
- Leveraged **Decision Trees** and **Boosting** for classification with 90% accuracy
- Deployed through **Heroku** with **PgBouncer** and **NGINX** as load balancers

Inspired by Silicon Valley Season 4 Episode 4

NNLib

📅 April 2018 – September 2018

- Created a light-weight Neural Network library using **numpy**
- Included **L1, L2 Regularization** and **Dropout** to reduce variance
- Implemented **back-substitution** and **gradient descent** through Chain Rule
- Abided by **PyPI** package structure and conventions including full **pytest** suite

Faustin
YHacks

📅 December 2017

- Provided real-time suggestions in reaction to the emotion in speech
- Trained a **Deep Neural Network** in combination with **IBM Watson** and **Volka-turi API**
- Classified speech in one of five emotional classes with 80% Accuracy
- Launched the application via **AWS** on a **CentOS** server

PROFICIENCIES

C   ●●●●●
C++   ●●●●○
Python   ●●●●○
TypeScript ●●●●○
Scheme   ●●●○○
Java   ●●●○○

TensorFlow   XGBoose   Keras

PostresSQL   SQLAlchemy   React
React-Native   Flask   NodeJS

Linux   Bash   Git   Phabricator

EDUCATION

Computer Science
Artifical Intelligence Option
Combinatorics and Optimization
University of Waterloo

📅 Sept 2017 – August 2022

4.00 Faculty GPA
Dean's Honour List
President's Entrance Scholarship

LANGUAGES

English   ●●●●●
Mandarin ●●●●○
French   ●●●○○