Andre Fu

andrefu.ca · andre.fu@mail.utoronto.ca · github.com/andre-fu

Skills

Languages:	Python · Typescript · C/C++/C# · Bash · R · MATLAB · Javascript
Tools & Technologies:	Git · Unix · Docker · PostgreSQL · MongoDB · Android SDK · Flutter Angular · React-Native · Nginx · uWSGI · Jenkins
Machine Learning:	Keras · Tensorflow · scikit-learn · scikit-image · NumPy· Pandas

Experience

Microsoft Corp. *Remote* Bellevue, WA
Program Management & Software Engineering Intern May 2020 - August 2020

- Identified, proposed & designed a novel sport-city association feature to link >**5k entities** in Bing's knowledge graph
- Designed backend pipeline to rank entities from a graph to a custom front end **under a 150ms overhead** bridging a gap in Bing's knowledge graph affecting >**1M monthly users**
- Research and designed a novel user abandonment metric using **SCOPE (SQL & C# stream operator)** on **petabytes of user log data** which targeted **80% of unsatisfied users**
- Drove insights from abandonment metric to generate a novel mainline answer addressing user abandonment

Interac Corp. Toronto, ON
Software Engineering Intern May 2019 - August 2019

- Designed and implemented a novel REST Notification Server to deliver **real-time** push notifications to a mobile app using a webhook through **NestJS** and **PostgreSQL**
- Implemented Native Bluetooth, NFC & Camera functionality to a mobile app using **React-Native** and **Flutter** for Bluetooth, NFC and QR scan & pay
- Designed UI/UX for an Analytics dashboard using **Angular, Nebular and RxJS**
- Designed deployment flow and deployed Servers & live websites using **Docker** & **Jenkins** to **AWS EC2** using **Nginx** & **uWSGI**
- Designed a secure Authorization service to improve native **Nebular** Authorization using **Angular** and **Typescript**
- Architected the overall system & software structure and of the merchant front-end to Server-side management systems **reducing consumer payment 10 fold**

International Genetic Engineering Machine Toronto, ON
Machine Learning Researcher & Project Lead March 2019 - November 2019

- Led a group of 6 students to develop novel unique solutions to computational protein optimization
- Designed a Machine Learning solution to protein optimization using **CNNs and a Naive Bayes** Classifier combined with a **Genetic Algorithm** and **Simulated Annealing**

Pardee Lab, University of Toronto Toronto, ON
Undergraduate Researcher May 2018 - August 2018

- Architected, Designed and Implemented an end-to-end solution for a Fluorescent Imaging Microscope from scratch for use in a **20 person lab** and **usage in South America**

Projects

ACESO

- Designed and implemented an end-to-end a Machine Learning powered Medical Diagnostic App
- Trained **CNNs on Kaggle Datasets** for Parkinson's and Malaria where they were tested using a **Flask API** that the Flutter App could hook into then deployed by **Dockerized Server** and launched on Microsoft **Azure**

Seedling - *In Progress*

- Designing and implementing an **open-source Machine Learning Library** for non-technical biology researchers to use
- Using **PEP 8** along with **Docker** and **Bash** scripts to **publish seedling on PyPi - pip**

Education

University of Toronto Toronto, ON
BASc in Engineering Science Expected May 2022