Andre Fu

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Education

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

Skills

Languages:	Python · Typescript · 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

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

- Designed and implemented a REST Notification Server to deliver push notifications to a mobile app using a webhook through **NestJS** and **PostgreSQL**
- Implemented Native Bluetooth & Camera functionality to a mobile app using **React-Native** and **Flutter**
- Designed UI/UX for an Analytics dashboard using **Angular, Nebular and RxJS**
- 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 structure of the merchant front-end to Server-side management systems

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

- Led a group of 6 students to develop 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**
- Constructed Statistical models for protein structure and ODE models for bioreactor design

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
- Engineered low-level servo-control for a portable diagnostic device using **C in a Raspbian Environment**
- Designed an easy-to-use UI/UX for a front-end using **Python, Qt and X-server**

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**

Awards & Achievements

TOHacks: Lantern Institute - Big Data Challenge ($2400 value) — June 2019

QHacks — February 2019

YorkU Hacks: WolframAlpha Award — September 2019

Youth Flight Canada — 2017, 2018, 2019