Edwin Zhang

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Education

Candidate for BASc in Computer Engineering | University of Toronto | 2018 – 2022
- Third Year Student Specializing in **Software** and minoring in **artificial intelligence** and **machine learning**
- CGPA: 3.66/4.0
- Four times Dean's List/Honors recipient (2018 – present)
- Edward S Rogers Scholarship valued at $5,000

Skills

Proficient Programming Languages:
C++, C, Python, Java

Web Tooling:
JavaScript, HTML, CSS, NodeJS, ReactJS

Other Skills:
Verilog, Quartus, MongoDB, PyTorch

Technologies:
GIT, Windows, Unix, Linux

Experience

Full Stack Developer at Major Tonic| Jun. 2020 - Present
- Designed automatic drop shipping inventory management system using **MongoDB Atlas** and **NodeJS**
- Coded responsive user interface with **React**
- Implemented client payment system using **Stripe**
- Designed user sign-in, sign-up and authorization strategies using asynchronous hashing and BcryptJS

Research and Design Engineer at StatsDrone | Jan. 2019 – Apr. 2019
- Designed improvements to existing big data validation algorithms to increase accuracy and precision
- Assisted in implementing security strategies to protect users from identity attacks
- Documented multiple reports and presented results to the founder of the company

Projects

COVID-19 Face Mask Detection| Python, PyTorch, OpenCV **|** Oct. 2020 – Dec. 2020
A neural network aimed to combat the spread of COVID-19 by assisting in enforcing mask policies
- Designed a convolutional neural network to classify faces into three categories: mask, no mask, incorrect mask
- Achieved a 96% test accuracy over a test dataset of 1000 images
- Integrated OpenCV compatibility to allow model predictions in real time

Open Street Map (OSM) GIS | C++, GTK, Valgrind **|** Jan. 2020 – Apr.2020
Developed a city mapping application with route planning for a design course
- Coded algorithms to parse raw data into more useable forms such as user-friendly graphics
- Implemented variations of **A*** and **Dijkstra** to calculate optimal routes between destinations
- Created an algorithm based off **simulated annealing** to solve a complex variant of the traveling salesman problem

Auto Application Tracker | Python, BS4, Pandas **|** May 2020 – June 2020
A program that automatically scrapes important data off online job applications and formats into excel
- Coded **web scraping algorithms** to support many public job boards
- Implemented data analytics functions to assist in monitoring the user's application process

Blue Sky Solar Racing| University of Toronto Design Team **|** Sept. 2018 – Sept. 2019
Blue Sky Solar manufactures a life sized solar powered race car to race 3000+ km every two years
- Assisted in designing car using **CAD/CATIA** software
- Manufactured carbon fiber aero-body and prototyped driver's chassis
- **Placed 11th internationally** at the 2019 BridgeStone World Solar Challenge