

ALLEN ZIFENG AN

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EDUCATION

McMaster University

September 2017 - May 2022

Mechatronics Engineering (Software Department), Biomedical Engineering
Bachelor of Engineering, Currently in Fourth Year out of Five Year

GPA: 3.9

Relevant Courses: Data Structures and Algorithm (SFWRENG 2MD3), Operating Systems (SFWRENG 3SH3), Databases (SFWRENG 3DB3)

PROJECTS

Personal Website

2020

<https://zifengallen.tk/>

Website UI Design. Flex Layout Design. Mobile First Principle. Bootstrap. Vanilla Javascript Games. Canvas Animations. Python Django Forum.

Mock Wechat Web

2020

Self designed and implemented a user system authenticating with JSON Web Tokens. Provided registered users with instant messaging services. Used NodeJS ExpressJS for backend framework. Wrote SQL to create CRUD APIs for splite3 database. Frontend AJAX design for Modularity and Scalability.

Memoritis, Hack The North 2019

2019

<https://devpost.com/software/memoritis/>

Created a platform that analyzes topics of user-uploaded videos and forms a graph between similar videos. Uses word2vec and the Google Video Intelligence API.

Gyro Spoon, Course Work

2017

Prototype Picture

Designed an auto adjusting spoon that counters Parkinson patients shaking hand to prevent food spill. Developed Python scripts to process real time data from gyroscopes and control servo motors on Raspberry Pi. Customized mechanical casing in CAD and 3D printed.

WORK EXPERIENCE

Summer Research Assistant, McMaster University

May 2019 - August 2019

Implemented a lane detection algorithm based on hough line transform from Python OpenCV and compiled the software on the Nvidia Jetson TX2 platform. Trained a neural network YOLO model in MATLAB through ground truth labelling module to recognize car models. Worked closely with graduate students from the department of computing and software.

Teaching Assistant, McMaster University

September 2018 - now

1ZA3 – Calculus, 1ZC3 – Linear Algebra

Conducted exam and midterm reviews in front of 200+ students. Provided tailored personal tutoring and organized workshops in the university math help center. Demonstrated outstanding presentation and communication skills.

Software Engineering Intern, Union Pay, Shanghai

June 2018 August 2018

Set up pseudo-distributed hadoop system using virtual machines to implement the word count example. Exposed to the Spark Map-Reduce model and Scala.

ACTIVITIES

Program Ambassador, McMaster University

October 2017 - now

Worked collaboratively with other ambassadors to advertise and promote the integrated biomedical engineering program. Served as the go to person during university open house and interfaced with prospective students and families.

SKILLS

Programming Languages

Proficient: Javascript, Python, HTML, CSS

Intermediate: Java, C/C++, MATLAB, Simulink

Basic: Assembly

Frameworks

NodeJS, ExpressJS, ReactJS, Django, OpenCV, NumPy, Matplotlib

Other

Proficient in Ubuntu/Linux systems, GCP, AWS, Aliyun, Raspberry Pi, Arduino, Nvidia Jetson TX2

Languages

English, Mandarin, Shanghainese

AWARDS AND SCHOLARSHIPS

Google HashCode Coding Challenge

Feb 2020

Worldwide Ranking 1000+.

Dean's Honour List ,McMaster University

May 2019

Given to degree students in the Faculty having a Cumulative Grade Point Average of 3.50 or higher.

McMaster President's Entrance Scholarship , McMaster University

September 2017

Awarded to high school students with an average higher than 95.

Biology Graduation Award , Bronte College

June 2017

Awarded by the high school during graduation to one student per subject.

Certificate of Completion , Mississauga

May 2017

Mississauga Half Marathon Race 2 hour 10 min.

Certificate of Distinction , Canadian Computing Competition, University of Waterloo

May 2017

Ranked top 20 percent in Canada in the Competitive Programming Competition.