

Tao Zhu

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EDUCATION

The University of British Columbia

M.Eng. in Computer Engineering

GPA: 3.74/4.0

Vancouver, BC

Sept. 2019 – May. 2021 (Expected)

Shanghai Jiao Tong University

B.S. in Computer Science

GPA: 3.7/4.0

Shanghai, China

Sep. 2015 – Jun. 2019

PROFESSIONAL EXPERIENCE

Software AnaLysis and Testing (SALT) lab, UBC

Research Intern

Vancouver, Canada

Jun. 2020 – Sept. 2020

- Performed an empirical study of using the Graph Neural Network(GNN) with PyTorch to automatically fix JavaScript bugs in a large dataset.
- Utilized Docker to containerize the GNN application to run on different servers.

Intel Corporation

Software Engineer Intern

Shanghai, China

Jun. 2018 – Sept. 2018

- Developed database performance benchmark for Intel's Zero-day Linux kernel performance testing framework using Shell and Ruby.
- Developed virtual machine testing functionality to automatically install and invoke the framework from hosting machine.
- Assisted in writing the documentation of the framework.
- URL:www.github.com/intel/lkp-tests

SELECTED PROJECTS

Blockchain Donation Platform

Blockchain Software Engineering Course Project

Jan. 2020 – April. 2020

- Developed a digital currency(Ether) donation platform as an decentralized application on the Ethereum blockchain using Truffle framework.
- Wrote smart contracts with the Solidity programming language. Tested the smart contracts using Mocha and deployed them to the local blockchain in Ganache.
- Built a dynamically rendered front end using React.js. Used Metamask extension to connect to our local Ethereum blockchain.

Shopping Store Web Application

Building Modern Web Applications Course Project

Sept. 2019 – Dec 2019

- Developed an online store web app with product filter and checkout functionality.
- Built a dynamically rendered front end with AJAX communication to the server.
- Designed a backend server with REST API using Node.js and Express.js and connected it to MongoDB.

Robocode Learning System

Architecture of Learning Systems Course Project

Sept. 2019 – Dec 2019

- Developed the controller of robocode tank with neural net and reinforcement learning using Java.
- Implemented the SARSA (on policy) version of the controller system and compared it with Q learning (off policy).
- Implemented a neural net to replace the look-up table and approximate Q function.

Facial Expression Recognition System

Developed an end-to-end facial expression recognition system with convolutional neural network and support vector machine to classify facial expression using Python.

Oct. 2018 – Feb. 2019

- Implemented functionality of image preprocessing, feature extraction and classification. The model reaches an accuracy of 95%.
- Wrote a technical report summarizing the work.

Linux Kernel Enhancement Project

Operating System Course Project

Feb 2018 - Jul. 2018

- Implemented a Linux system call to print the entire process tree in DFS order and another system call to translate the virtual address of a process to physical address.
- Changed Linux page replacement algorithm to second-chance algorithm.

ADDITIONAL INFORMATION

- Programming Languages: JavaScript, Java, Python, C, C++,
- Tools: Linux, Docker, Version Control (Git, Github), Web Frameworks (React.js, Express.js, Node.js), Database(MongoDB), Testing (JUnit), Communication (\LaTeX), , Deep learning framework (Keras, PyTorch)
- Languages: Fluent in Chinese (first language) and English (TOEFL 109, GRE 331 + 4.0)