Guanghan Wang

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Education

University of Toronto — Toronto, ON

Bachelor of Applied Science in Engineering Science, Machine Intelligence option — *September 2019 – June 2024*

- Current Year: 3 Expected Graduation Date: June 2024 Cumulative Average: **3.93**/4.0

ECE421H1	INTRODUCTION TO MACHINE LEARNING	99
ECE358H1	FOUNDATIONS OF COMPUTING	100
ECE352H1	COMPUTER ORGANIZATION	95
ECE361H1	COMPUTER NETWORKS I	95
CSC343H1	INTRODUCTION TO DATABASES	94
ROB311H1	ARTIFICIAL INTELLIGENCE	93
ECE353H1	SYSTEMS SOFTWARE	92

Coursera

DeepLearning.AI — Deep Learning Specialization by Andrew Ng (certificate) — Summer 2021

Technical Skills & Interests

Languages: Python, C, ARM, NIOS, Verilog, MATLAB, HTML/CSS/JavaScript, SQL, Java, Perl
Tools: Git/GitHub, Bash, Intel Quartus Prime, ModelSim, LaTeX, LTspice, Wireshark
Frameworks & Libraries: PyTorch, NumPy, Matplotlib, TensorFlow, pandas, scikit-learn
Interests: passionate about online education; Japanese anime and Chinese classic literature; course overloading

Experience & Projects

Undergrad Intern Technical — May 2022 - Present

Intel Corporation — *Toronto, ON*

- Learned the breadth of technical activities that are required for a modern HLD program
- Enabled Intel® FPGA AI Suite customers to use Python API from OpenVINO

Teaching Assistantship — Fall 2021, Winter 2022, Fall 2022

University of Toronto — *Toronto, ON*

- ESC180: INTRODUCTION TO COMPUTER PROGRAMMING (Fall 2021, Fall 2022)
- ESC190: COMPUTER ALGORITHMS & DATA STRUCTURES (Winter 2022)

Summer Research on Security and Machine Learning | *Python* — Summer 2021 – Present

Toronto Systems Security Lab (UofT); Summer Research Assistant *with Prof. David Lie* — *Toronto, ON*

- Collected logs and code coverage using a fuzzer based on AFL
- Trained a decision tree and LSTM neural network to predict code region coverage based on logs
- Achieved an accuracy of 99.7%

Summer Research on Audio Adversarial Machine Learning | *Python* — Summer 2020

CleverHans Lab (UofT and Vector Institute); Summer Research Assistant *with Prof. Nicolas Papernot* — *Toronto, ON*

- Devised a genetic algorithm to tackle audio adversarial ML of speaker verification under a black box setting
- Achieved the goal of lowering the model accuracy below 1%
- Paper: *On the Exploitability of Audio Machine Learning Pipelines to Surreptitious Adversarial Examples*

Goal? Go! (link) | *React Native* — February 2021

Hackathon, Team Leader — *Toronto, ON*

- Developed a mobile application to help users keep track of their goals and share them with friends or the public
- Aimed to strengthen the connections among people and promote a more active lifestyle during COVID-19 pandemic
- Implemented in React Native and open-sourced on GitHub

Student Organizations — September 2020 – August 2021

Student Clubs, Executive Member — *Toronto, ON*

- University of Toronto Application Development Association, Technology Department
- Associated of Chinese Engineers, Marketing Department, Web Master

Honor & Awards

2020	The John M. Empey Scholarships (achieving the highest average percentage of marks in the year)
2019	University of Toronto Scholar
2018	Intensive Study on Computer Science, Stanford University
2018	AP Scholar with Distinction Award
2018	Physics Bowl Contest Regional Top 10 & Global Top 100