YANQING WU

meet.yanqing.wu@gmail.com ◇ yanqing-wu.com ◇ LinkedIn/wuyanqing ◇ GitHub/pwyq ◇ +1 519-572-1997

SUMMARY

Programming C++, Python, MATLAB, Bash, JavaScript, Scala, Java
Tool kits Unix (Ubuntu/Arch/macOS), Git, Vim, ROS, Keras, TensorFlow, Sklearn, Pandas, OpenCV

WORK EXPERIENCE

IBM · *Extreme Blue Intern* · *Toronto, ON* May - Aug. 2019

- Prototyped a pipeline to identify trustworthy connection profiles, reducing processing time from days to hours
- Explored classification models and feature embedding techniques with Keras and Sklearn, achieving 92%+ prediction accuracy
- Pitched our technical and business solution to a panel of IBM executives at New York Expo

NXP Semiconductors · *Embedded Vision & Deep Learning Intern* · *Ottawa, ON* Sep. - Dec. 2018

- Optimized on-board Advanced Driver-Assistance Systems (ADAS) vision APIs in C++, speeding up 200%+
- Extended a cross-platform GUI with JavaScript to support editing neural network sub-graphs and layer attributes
- Reviewed 50+ papers and presented promising semantic segmentation models to project lead; trained and evaluated BiSeNet

Huawei, Noah's Ark Lab · *Self-Driving Simulation Intern* · *Toronto, ON* Jan. - Apr. 2018

- Extended a real-world roadmap based scenario generator in Python, speeding up the training process of self-driving agents
- Maintained and developed features for the team-wise used simulator using Python and C++
- Contributed to the *paper* (**NIPS 2018 MLITS**), including literature review and data collection

University of Waterloo · *Software Engineering Intern* · *Waterloo, ON* May - Aug. 2017

- Worked with the founding teams of startups: prototyped ROI model at *DeepSubconscious* and BLE beacons app at *Ethica*

RESEARCH EXPERIENCE

Undergraduate Research Assistant · *Advisor: Prof. Arash Arami* · *Waterloo, ON* May 2018 - Nov. 2018

- Explored a CNN-LSTM model with MATLAB to predict gait freeze in Parkinson's disease
- Extracted features in multivariate time series data from wearable acceleration sensors

PROJECTS

Netflix Challenge: Movie Rating Prediction · *Delft, Netherlands* Dec. 2019 - Jan. 2020

- Developed a recommendation system using Item-Item Collaborative Filtering, achieving RMSE=0.8455 (rank 1/250+)

Kirsch Edge Detector · *Waterloo, ON* Jan. - Apr. 2019

- Implemented Kirsch Edge Detector in VHDL on Altera, scoring top 5% in terms of FPGA area and processing speed

FPGA Music Player · *Waterloo, ON* May - Jul. 2018

- Implemented a music player on the Altera Max10 FPGA using C, with play, pause, fast-forward and rewind features

University Rover Challenge 2017 · *UW Robotics Club* · *Waterloo, ON* Jan. - Feb. 2017

- Independently implemented *Real-Time Ball Tracking* with contour tracking, contributing to a final top 15 (out of 80+)

Line-Following Music Robot · *UW Robotics Club* · *Waterloo, ON* Sep. - Nov. 2016

- Led the development of electric circuit, including an R-2R ladder as a DAC to drive a speaker, a sensor suite to convert grayscales to music notes, and signal filtering for enhancing output sound quality
- Organized the selections of all electronic and mechanical components to meet performance and budget requirements

EDUCATION

University of Waterloo · *Waterloo, Canada* Sep. 2016 - May 2021
B.ASc in Computer Engineering, Honours, Co-op · CGPA: 3.6/4.0

Delft University of Technology (TU Delft) · *Delft, Netherlands* Sep. 2019 - Jan. 2020
Computer Science and Engineering, Exchange · 8.0/10

Coursework: Embedded Programming, Control Theory, Data Mining, Deep Learning Specialization (Coursera, 6 courses)