

YANQING WU

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SUMMARY

Programming C++, C, Python, JavaScript, Java, Bash, MATLAB
Tool kits Linux (Ubuntu/Arch), Git, Vim, ROS, Keras, TensorFlow, Scikit, 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 Scikit, 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
- Built a real-world roadmap based scenario generator in Python, speeding up the training process of self-driving agents
 - Contributed to the *paper* (accepted as **NIPS 2018 MLITS** poster), including literature review and data collection
 - Maintained and developed features for the team-wise used simulator using Python and C++
- Conrad School of Entrepreneurship and Business · BETS Intern · Waterloo, ON** May - Aug. 2017
- Worked directly with the founding teams of two early-stage startups
 - Designed and built a ROI model of workplace performance for cost-effectiveness analysis at *DeepSubconscious.ai*
 - Prototyped an iOS app that configures Bluetooth Low Energy (BLE) beacons from major providers at *Ethica Data*

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

- Kirsch Edge Detector · Waterloo, ON** Jan. - Apr. 2019
- Implemented Kirsch edge detector algorithm in VHDL on Altera
 - Scored top 5% in class by optimizing the trade-off between 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
- Mars Rover · UW Robotics Club · Waterloo, ON** Jan. - Feb. 2017
- Contributed *Real-Time Ball Tracking*, and ranked top 15 in the International University Rover Challenge 2017
 - Implemented contour tracking algorithm and watershed algorithm for locating multiple balls from video input
- 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 grayscale 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

Coursework: Embedded Programming, Control Theory, Computer Graphics, Deep Learning Specialization (Coursera)