Kevin Mi

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Education

University of Toronto **Sept. 2020 – Present**

Bachelor of Applied Science in Engineering Science major in Machine Intelligence *Toronto, ON*

- **Courseworks**: Software Engineering, Natural Language Processing, Embedded Systems, Deep Learning, Reinforcement Learning
- **Awards**: NSERC Undergraduate Student Research Awards, Dean's List Scholar, Engineering Entrance Scholarships

Technical Skills

Programming Languages: Python, C#, C++, Java, MATLAB/Simulink, JavaScript
Machine Learning Tools: TensorFlow/Keras, PyTorch, NumPy, Pandas, scikit-learn
Technical Tools: React, Node.js, Ruby, AutoCAD/Solidworks, Flask, Git/JIRA, Heroku

Experience

Qualcomm **May 2023 – Present**

Automotive Software Engineering Intern *Markham, ON*

- Working on camera software stack of next-gen Snapdragon Ride Autonomous Driving Platform

Spacecraft Dynamics Control Lab, Lassonde School of Engineering **May 2021 – Present**

Autonomous Vehicle Researcher *Toronto, ON*

- Co-author on "Deep Reinforcement Learning Based Game-Theoretic Decision-Making for Autonomous Vehicles", **published by IEEE Robotics and Automation Letters (RA-L) and ICRA 2022. (DOI: 10.1109/LRA.2021.3134249)** (**ICRA 2022 Research Video**)
- Co-author on "From Naturalistic Traffic Data to Learning-based Driving Policy: A Sim-to-Real Study", under review at IEEE Transactions on Vehicular Technology.
- Implemented deep reinforcement learning algorithms (D3QN) with a combination of game theory using **Tensorflow** and **ROS**, which reduced collision by **20%** compared to baseline algorithms.

Trimble (Applanix) **May 2022 – Sept. 2022**

Software Engineering Intern *Richmond Hill, ON*

- Implemented scripts to extract and display LiDAR point cloud data as overlaying strips in Applanix's GNSS/INS mapping software using **C++ and C#** to provide **50%** of current users with better visual effects of trajectory.
- Optimized the continuous integration and regression testing of Applanix software with auto-generated reports using **MATLAB**, boosting efficiency by **30%** compared to previous implementations.
- Designed a script to generate base station satellite data plots and incorporate new sections in the Quality Check report.
- Addressed various JIRA bugs, conducted code reviews and dataset collections, and implemented enhancements to improve software performance and user experiences.

Omni Labs **Sept. 2022 – May 2023**

Software/Machine Learning Engineer *San Francisco, CA*

- Enhanced the Omni Chat API by expanding the retrieval scope of pertinent information from the user's database, ensuring a richer context for prompts and references. (**Omni Chat Showcase**)
- Streamlined the API's performance by optimizing data fetching processes, resulting in improved user experience and more accurate context-aware suggestions.
- Designed and implemented a summarization feature for Omni's Chrome extension, enhancing user experience by displaying pertinent information during browsing and writing activities.

aUToronto, Self-Driving Car Team, University of Toronto **Aug. 2021 – Sept. 2022**

Software Engineer - Perception Tracking and Integration *Toronto, ON*

- Ameliorated the current data association method by replacing greedy algorithm with the Hungarian algorithm, which increased object tracking accuracy by **15%**.
- Collaborate with a team of five members to work on implementing multiple algorithms, and troubleshoot issues, which led to our university winning 1st Place for the fourth consecutive time for the SAE AutoDrive Challenge.