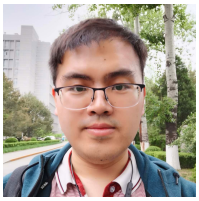
Wei Wang



wei.wang.bit@outlook.com
(+1) 437-987-8827
Magic-wei
magic-wei
Beijing, China

C++
Python
Linux
ROS
V-REP

Education

University of Toronto, Toronto, ON, Canada — Sept. 2019 – Present
Visiting Ph.D. Student
Advisor: Prof. Steven L. Waslander

Beijing Institute of Technology, Beijing, China — 2015 – Present
Ph.D. in Mechanical Engineering, expected June 2021
Advisor: Prof. Huiyan Chen

Harbin Institute of Technology (Weihai), Weihai, China — 2011 – 2015
B.S. in Automobile Engineering
GPA: 3.53/4 **RANK:** 9/135

Research Interests

- Learning-based Motion Planning and Control
- Model Predictive Control (MPC)
- Reinforcement Learning

Experience

Path Tracking Algorithms Review and Verification — Oct. 2018 – Dec. 2018
Leader

Brief introduction:

- Developed new framework for motion control algorithms based on ROS for better developing and verifying, which unified the interfaces used in real vehicle platforms and V-REP simulation platforms
- Led a group of four beginner-level members to review papers and implement some useful algorithms which are verified in V-REP simulation vehicle and real vehicle platforms.

Autonomous Ground Vehicle Challenge 2018 — Nov. 2017 – Sep. 2018
Core Leader

Brief introduction:

- Led a group of nine to redesign x-by-wire actuators for throttle and braking and develop motion control algorithms for LandCruiser autonomous vehicle
- Co-developed and verified kinematic and dynamic-based MPC path tracking controller
- Constructed motion control framework based on ROS and migrated motion control algorithms from RCS to ROS
- Developed a kinematic-based MPC path tracking algorithm in Frenet frame with delayed control

Autonomous Minibus Development — Oct. 2017 – Dec. 2017
Core Member

Brief introduction:

- Verified and improved path tracking algorithms for minibus trial operation in Shenzhen, China.

4D/RCS Framework Development Dec. 2016 – May. 2017

participant

Brief introduction:

- Migrated path tracking algorithms to RCS framework

Autonomous Ground Vehicle Challenge 2016 Jun. 2016 – Sep. 2016

Core Member

Brief introduction:

- Designed, implemented and refined automatic shifting mechanisms and automatic steering mechanisms for two autonomous vehicles, which have been used since then
- Cooperated with two other members to be responsible for hardware maintenance of two autonomous ground vehicles

Skills

- **Programming Languages:** C++ > Matlab = Python > Bash > Cmake = Lua ...
- **Platform:** Linux, Windows
- **Tools:** ROS, V-REP, Clion, CarSim, RCS ...
- **Development:** Perform the test-driven development work-flow with code reviews while following the Google C++ Style guide and the typical git work-flow.

Honors and Awards

- Part of BIT team that won the third place in Autonomous Ground Vehicle Challenge 2018 2018