Haowei Sun

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EDUCATION

TSINGHUA UNIVERSITY

Beijing, China

09.2015-present

School of Information Science and Technology, Department of Automation

- Major: Automation
- Major GPA: **3.53** / 4, Rank: **11** / 160
- Programming skill: Python, Matlab, R, C, C++, Javascript, HTML
- English: TOEFL 103(24)
- Core Curriculums: Linear Algebra 4.0, Calculus(1)(2) 4.0, Principles of Computer 4.0,

Probability theory and mathematical statistics 3.7, C Programming 3.7, Data structure & algorithms 3.7, Automatic Control Principle 3.7, .

RESEARCH

Vehicle Algorithm Detection(Work in process) Researcher

12.2017-present

- Research objectives: Find detection methods to test the autonomous driving vehicle algorithms in aspect of safety and collision avoidance.
- Main Work Content: Design car-following scenes, generate detection algorithm using methods of deep Q learning and nonlinear optimization methods

Optimization Based Method in Car Control

Researcher

06.2017-present

- Paper Title: Tube-Based Discrete Controller Design for Vehicle Platoons Subject to Disturbances and Saturation Constraints (in submission)
- Journal Title: IEEE Transactions on Control Systems Technology
- Authorship: Second Author
- Main Work Content: Implement the algorithm using convex optimization and model prediction control and explore the effects of the algorithm under different conditions.

Traffic Flow Time Series Analysis

Researcher

12.2016-03.2016

- Paper Title: A better understanding of long-range temporal dependence of traffic flow time series
- Journal Title: Physica A
- Authorship: Third Author
- Main Work Content: Apply some simple but basic methods(such as multiple linear regression) on the traffic flow time series data.

HONORS & AWARDS

• 2016 Tsinghua University Hengda Scholarship, honored for 10% GPA in Department of Automation 11.2016

• 2017 Tsinghua University Scholarship, honored for 10% GPA in Department of Automation

11.2017