# Yue Meng

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## EDUCATION

**M.S. in Electrical and Computer Engineering** Sep. 2017 - Mar. 2019
University of California San Diego, CA, USA **GPA: 4.0/4.0**

**B.E. in Department of Automation** Aug. 2013 - Jul. 2017
Tsinghua University, Beijing, China **GPA: 87/100**

## FIELD OF INTERESTS

Semantic & geometry perception; 3D reconstruction; autonomous navigation;

## RESEARCH EXPERIENCE

**Research Intern**, Honda Research Institute, MountainView, CA, USA Mar. 2019 - Jun. 2019
Advisor: Yiting Chen, Research Scientist
- Learn semantic and geometry representation for traffic scene understanding

**Research Assistant**, University of California San Diego, CA, USA Jan. 2018 - Mar. 2019
Advisor: Nikolay A. Atanasov, Electrical and Computer Engineering
- Developed semantic perception and tracking pipeline for 3D reconstruction
- Conduct research in object level 3D compression for mapping
- Presented on **RSS 2018** workshop and submitted works to **IROS 2019** and **ICCV 2019**

**Research Assistant**, University of California San Diego, CA, USA Aug. 2018 - Nov. 2018
Advisor: Dinesh Bharadia, Tara Javidi, Electrical and Computer Engineering
- Proposed semantic unsupervised learning framework for scene geometry perception
- Improved depth prediction by 30% over state-of-art unsupervised algorithms
- Published the paper as first author in **CVPR 2019**

**Research Assistant**, Tsinghua University, Beijing, China Sep. 2015 - Jun. 2017
Advisor: Li Li, Department of Automation
- Designed a simulation platform for micro-scope transportation at non-signal intersections
- Analyzed different cooperative driving strategies in traffic flow simulations
- Published the paper as first author in **IEEE TVT 2018**

## PUBLICATIONS

**Y. Meng**, Y. Lu, A. Raj, S. Sunarjo, G. Bansal, R. Guo, T.Javidi, and D. Bharadia, "SIGNet: Semantic Instance Aided Unsupervised 3D Geometry Perception," in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*(**CVPR**), CA, Jun. 2019 (acceptance rate 25.2%)

Q. Feng, **Y. Meng**, M. Shan, and N. Atanasov, "Localization and Mapping using Instance-specific Mesh Models," submitted to 2019 *IEEE International Conference on Intelligent Robots and Systems*(**IROS**)

M. Shan, Q. Feng, **Y. Meng**, and N. Atanasov, "OrcVIO: Visual-Inertial Odometry and Object Mapping with Structural Constraints," submitted to 2019 *IEEE International Conference on Computer Vision*(**ICCV**)

**Y. Meng**, L. Li, F. Wang, K. Li, and Z. Li, "Analysis of Cooperative Driving Strategies for Nonsignalized Intersections," *IEEE Transactions on Vehicular Technology, 67 (4)*, 2900-2911

## TEACHING EXPERIENCE

**Teaching Assistant**, University of California, San Diego, CA, USA Jan. 2019 - Mar. 2019
Instructor: Behrouz Touri, Electrical and Computer Engineering
Course: Stochastic Processes in Dynamic Systems I

## PROFESSIONAL EXPERIENCE

**Software Engineering Intern**, Google Inc, New York, NY, USA Jun. 2018 - Sep. 2018
- Migrated Ads prediction models from Sibyl to Tensorflow platform
- Created MapReduce jobs for analysis on production data

**System Development Intern**, TuSimple Inc, Beijing, China Jul. 2017 - Sep. 2017
- Implemented real-time perception algorithm for cameras on bus using Faster-RCNN
- Optimized the image processing procedures and increased the pipeline efficiency by 40%

## TECHNICAL SKILLS

**Programming**: Python, C++, Matlab, C#

**Tools**: Tensorflow, Pytorch, ROS, Git, Linux, Docker, Kubernetes, LaTeX

**Languages**: Proficient in English and Chinese

## SELECTED COURSES

| | | |
|---|---|---|
| MATH245B | Convex Analysis and Optimization II | (ongoing) |
| MAE281A | Nonlinear Systems | (ongoing) |
| CSE254 | Intrinsic dimension and Dimension reduction | (ongoing) |
| ECE272A | Stochastic Processes in Dynamic Systems I | **A+, 1/78** |
| ECE269 | Linear Algebra and Applications | **A+, 1/191** |
| ECE276A | Sensing and Estimation in Robotics | **A, 3/113** |
| ECE273 | Convex Optimization and Applications | **A, 4/107** |
| ECE271A | Statistical Learning I | **A+, 5/202** |
| CSE252A | Computer Vision I | **A+, 5/165** |
| CSE253 | Neural Networks for Pattern Recognition | **A+, 6/212** |

## AWARDS AND HONORS

Study Scholarship of Tsinghua University, 2014, 2015

Sports Scholarship of Tsinghua University, 2014, 2015

$8^{th}$ Award in RoboCup@Home Competition, 2015

**First Award** in first Tsinghua Undergraduate Class Futsal Match, 2014

**First Awards** in male 1500m, 4×800m, 4×400m races in Tsinghua Athletic Meeting

Tsinghua high school male 3000m race **record holder (2012-Present)**