

# Yue Meng

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## EDUCATION

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**M.S. in Electrical and Computer Engineering**  
University of California San Diego, CA, USA

Sep. 2017 - Mar. 2019  
**GPA: 3.97/4.00**

**B.E. in Department of Automation**  
Tsinghua University, Beijing, China

Aug. 2013 - Jul. 2017  
**GPA: 87/100, rank: top 30%**

## FIELD OF INTERESTS

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

## RESEARCH EXPERIENCE

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**Research Intern**, Honda Research Institute, San Jose, CA, USA  
Advisor: Yi-Ting Chen, Research Scientist

Mar. 2019 - Jun. 2019

- Learn semantic 3D representation from videos and multi-modal sensors

**Research Assistant**, University of California San Diego, CA, USA  
Advisor: Nikolay A. Atanasov, Electrical and Computer Engineering

Jan. 2018 - Mar. 2019

- Developed semantic perception and tracking pipeline for 3D reconstruction
- Conducted research in object level 3D compression for mapping
- Presented on **RSS 2018** workshop and published the work to **IROS 2019**

**Research Assistant**, University of California San Diego, CA, USA  
Advisor: Dinesh Bharadia, Tara Javidi, Electrical and Computer Engineering

Sep. 2018 - Dec. 2018

- 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  
Advisor: Li Li, Department of Automation

Sep. 2015 - Jun. 2017

- 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

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Q. Feng, **Y. Meng**, M. Shan, and N. Atanasov, “Localization and Mapping using Instance-specific Mesh Models,” in *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems(IROS)*, Macau, China, Nov. 2019

**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)*, Long Beach, CA, Jun. 2019 (acceptance rate 25.2%)

**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

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**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

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**Software Engineering Intern**, Google Inc, Mountain View, CA, USA      Jun. 2019 - Sep. 2019  
– Working on Google Photos

**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

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

**Tools:** Tensorflow, Pytorch, ROS, Git, Linux, Docker, Kubernetes, L<sup>A</sup>T<sub>E</sub>X

**Languages:** Proficient in English and Chinese

## GRADUATE COURSES (ALL)

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ECE272A	Stochastic Processes in Dynamic Systems I	<b>A+, 1/78</b>
ECE269	Linear Algebra and Applications	<b>A+, 1/191</b>
ECE276A	Sensing and Estimation in Robotics	<b>A, 3/113</b>
ECE273	Convex Optimization and Applications	<b>A, 4/107</b>
ECE271A	Statistical Learning I	<b>A+, 5/202</b>
CSE252A	Computer Vision I	<b>A+, 5/165</b>
CSE253	Neural Networks for Pattern Recognition	<b>A+, 6/212</b>
CSE254	Intrinsic dimension and Dimension reduction	<b>A, */18</b>
MATH245B	Convex Analysis and Optimization II	<b>A, */25</b>
ECE271C	Deep Learning and Applications	<b>A, 13/33</b>
MAE281A	Nonlinear Systems	<b>A-, 15/39</b>

## AWARDS AND HONORS

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Study Scholarship of Tsinghua University, 2014, 2015

Sports Scholarship of Tsinghua University, 2014, 2015

8<sup>th</sup> 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)**