Yue Meng

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EDUCATION

- **M.S. in Electrical and Computer Engineering, GPA: 4.0/4.0** Sep. 2017 - Current
  University of California San Diego, CA, USA
- **B.S. in Automation, GPA: 3.7/4.0** Aug. 2013 - Jul. 2017
  Tsinghua University, Beijing, China

RESEARCH INTERESTS

- My direction focuses on semantic simultaneous localization and mapping(SLAM). I manage to leverage extracted semantic information with constraints from multi-view geometry, motion model, and structural prior from scene and instance knowledge to promote the research in robust and efficient SLAM.

RESEARCH EXPERIENCE

- **Research Assistant**, University of California, San Diego, CA, USA Jan. 2018 - Current
  Advisor: Nikolay Atanasov, Electrical and Computer Engineering
  - Proposed SLAM tracking and loop closure detection strategy with semantic keypoints.
  - Designed lightweight algorithm for semantic filtering and 3D reconstruction.
  - Built SLAM front-end pipeline for semantic perception in ROS.
  - Got familiar with MSCKF, ORB-SLAM2 algorithm and KITTI, TUM and EuRoC dataset.
- **Research Assistant**, Tsinghua University, Beijing, China Sep. 2015 - Jun. 2017
  Advisor: Li Li, Department of Automation
  - Made a simulation platform for micro-scope transportation at non-signal intersection
  - Implemented different cooperative driving strategies in simulation software

WORK EXPERIENCE

- **Software Engineering Intern**, Google Inc, New York, NY, USA Jul. 2018 - Sep. 2018
  - Migrated Ads-related metric prediction models from Sibyl to Tensorflow ML-based platform.
  - Used MapReduce for data acquisition and analysis from distributed storage service.
- **System Development Intern**, TuSimple Inc, Beijing, China Jul. 2017 - Sep. 2017
  - Designed ROS node for real-time perception from cameras and LiDARs on bus via Faster-RCNN.
  - Optimized the image processing procedures and increased the pipeline efficiency by 40%

PUBLICATIONS

- Feng, Q. J., Meng, Y., Shan, M., & Atanasov, N. (2019). Object Level SLAM using Deformable Mesh Model. *2019 IEEE International Conference on Robotics and Automation (ICRA 2019).* (Pending)
- Feng, Q. J., Meng, Y., & Atanasov, N. (2018). Dense Spatial Segmentation from Sparse Semantic Information. Spotlight in *LAIR Workshop at Robotics Science and Systems (RSS),* 2018.
- Meng, Y., Li, L., Wang, F. Y., Li, K., & Li, Z. (2018). Analysis of Cooperative Driving Strategies for Nonsignalized Intersections. *IEEE Transactions on Vehicular Technology, 67(4)*, 2900-2911.

SKILLS

- **Programming**: Python, C++, Matlab, C#
- **Tools**: Tensorflow, Pytorch, ROS, Rviz, Docker, Git, LaTeX, Linux
- **Courses (grades, rankings)**: Statistical Learning(A+, 5/202), Computer Vision(A+, 5/165), Sensing & Estimation in Robotics(A), Neural Network(A+, 6/212), Convex Optimization(A, 3/107)