

Yijun Yuan

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Education

Sept. 2018 – Present ■ **M.E., Computer Science and Technology, School of Information Science and Technology, ShanghaiTech University, China.**

Sept. 2014 – Jun. 2018 ■ **B.E., Computer Science and Technology, School of Information Science and Technology, ShanghaiTech University, China.**

Employment

Feb. 2019 – Present ■ **Computer Vision Engineer Intern, Nullmax Inc.**

Experience

Teaching

Spring 2018 ■ **Teaching Assistant, Computer Architecture I.**

Research

Fall 2016 - Aug. 2017 ■ **Computer Vision** (Retina image segmentation, Crowd Counting).

Sept. 2017 - Aug. 2018 ■ **Mapping, Robotics** (1. Automatic Generation of Hierarchical Area Topology Representations from 2D Grid Maps (Bachelor's Thesis), 2. Fast Gaussian Process Occupancy Mapping (ICARCV2018), 3. Incrementally building topology graphs via distance maps (RCAR2019), 4. Topological Area Graph Generation and its Application to Path Planning.)

May. 2018 - Nov. 2018 ■ **Machine Learning** (1. Deep Kernel Learning with Randomized Sketches, 2. CBCT Calibration).

Oct. 2018 - Jan. 2019 ■ **Robot Learning** (Attempt to use RL/IL on Arms with Vrep simulator and openAI RL baseline).

Feb. 2019 - May. 2019 ■ **Planning, Robotics** (Configuration-Space Flipper Planning for Rescue Robots)

■ **Computer Vision** (Planar Object Tracking)



May. 2019 - present ■ **Mapping, Robotics** (GPOM further work)

■ **Computer Vision** (3D registration)







Research Publications

- 1 Yuan, Y., Wang, L. & Schwertfeger, S. (2019). Configuration-space flipper planning for rescue robots. *arXiv preprint arXiv:1905.02984*.
- 2 Yuan, Y. & Schwertfeger, S. (2019). Incrementally building topology graphs via distance maps. In *2019 IEEE International Conference on Real-Time Computing and Robotics (RCAR)* (to be published). IEEE.
- 3 Yuan, Y., Kuang, H. & Schwertfeger, S. (2018). Fast gaussian process occupancy maps. In *2018 15th International Conference on Control, Automation, Robotics and Vision (ICARCV)* (pp. 1502–1507). IEEE.
- 4 Jiawei, H., Yuan, Y. & Schwertfeger, S. (2018). Topological area graph generation and its application to path planning. *arXiv preprint arXiv:1811.05113*.

Awards

- 2016  **Dean's Scholarship** ShanghaiTech University.
- 2017  **Excellent Scholarship**, ShanghaiTech University.
- 2018  **Fan's Favorite Prize, NO.4 in total score, Best on HPCG and Tensorflow**, ISC 2018 high performance competition, Frankfurt, Germany.

Skills

Professional skills	 Computer Vision, Robotics, Machine Learning, Deep Learning, Stochastic Processes
Programming	 Python, C ++ , C, MATLAB, R
Software	 ROS, Gym
Simulator	 Vrep.
Framework	 Tensorflow, Pytorch
Language	 English (fluent), Chinese (native)