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 – May. 2019 — **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 — **Computer Vision** (Planar Object Tracking)

Feb. 2019 - present — **Planning, Robotics** (Configuration-Space Flipper Planning for Rescue Robots (SSRR2019); 3D terrain flipper planning)

Mapping, Robotics (GPOM representation)

May. 2019 - present — **Computer Vision** (Point cloud representation for 3D registration)

Research Publications

1. Yuan, Y., Wang, L. & Schwertfeger, S. (2019). Configuration-space flipper planning for rescue robots. In *2019 ieee international symposium on safety, security, and rescue robotics (ssrr)* (to be published). IEEE.
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, 3DTK
Simulator	Vrep
Framework	Tensorflow, Pytorch
Language	English (fluent), Chinese (native)