



Yafu Tian

Ph.D Candidate

State Key Laboratory of Robotics and System



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Harbin China



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<https://tianyafu.github.io/>



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Skills

Programming (C++, Python .etc)

Machine learning (statistical)

Writing hardware driver

Data visualization

LaTeX

ROS

Image processing & feature extraction

Graph based algorithm and theory

Control theory and state estimation

(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Research Interests

Semantic SLAM, Object Detection and Recognition, Environment reconstruction

Education

- since 2017.9 Ph.D. Candidate Harbin Institute of Technology
State Key Laboratory of Robotics and System
Majoring in Robotics (Software system)
- 2016-2017 Ph.D. Student Harbin Institute of Technology
State Key Laboratory of Robotics and System
Majoring in Robotics (Software system)
- 2012-2016 Undergraduate Harbin Engineering University
Chen Geng experimental class.
Specializing control theory and computer science.
GPA 3.8 with 4.0 overall

Publications

- 2016.8 Tian Y, Wang K, Li R and Zhao L (2016) Fast map segmentation method based on spectral partition for robot semantic navigation. In: 2016 IEEE International Conference on Mechatronics and Automation. pp. 10591065. DOI:10.1109/ ICMA.2016.7558709.
- 2018.1 Yafu Tian,Ke Wang, Ruifeng Li, Lijun Zhao A Fast Incremental Map Segmentation Algorithm Based on Spectral Clustering and Quad Tree. (under review)

Awards

- 2013.5 National Air Model Competition Second prize
- 2013.10 Chinese Robot Competition & RoboCup (AUV event) First prize
- 2014.9 Chinese Robot Competition & RoboCup (AUV event) First prize
- 2014.6 Mathematical Modeling of Northeastern Provinces League Second prize
- 2013-2015 Scholarship for Outstanding Student 6 times with 6 overall
- 2013.10 Merit Student
- 2013.10 Master of Sports & Certified Judge Grade 2 for Volleyball

Projects

- 2016-2017 Whole Robot Software System & Controller on Mobile Platform
Patrol Robot XiaoBai & XiaoHuang (Check my website for details)
- 2016-2017 Fast map segmentation method based on spectral partition for robot semantic navigation 1 SCI and 1 EI Conference Paper
- 2015-2016 SLAM and Navigation System for Indoor Patrol Robot
Graduation Design
- 2015.8 Neusoft Project Training Internship
Embedded system development
- 2013-2015 Robot software system development
Participate in writing AUV (Underwater Autonomous Robot) Controller and Hardware Driver. Responsible for object detection and state estimation.
- 2012-2013 Robot software system development
Writing aeromodel and UGV hardware driver.
Writing path planner and base controller.

Other information

My life goal is to implement science fiction vision of advanced artificial intelligence. And I devote myself to any research field which will help. A more actual goal is to make robot learning and recognizing environment automatically. In past few years I focused on state estimation and environment recognition problem of different robots (Aeromodel, AGV and AUV).