Fan Li

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EDUCATION

Tongji University, Shanghai, China 2021.09 – 2024.03 (expected)

M.Sc. in Machanical Engineering

- Main courses: Robotics, Planning algorithms, Pattern recognition

École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland 2022.09 – 2023.02

Exchange study in Robotics

- Main courses: Convex optimization, Model predictive control

Tongji University, Shanghai, China 2016.09 – 2021.07

B.Eng. in Machanical Engineering (Specialization: Mechatronics)

- Granted the honor of **Excellent Graduate Student** in Shanghai (top 3% students from all majors, provincial)
- Seized the **China National Scholarship** (top 0.2%, national) and the Scholarship for Excellence, etc.

PROJECT EXPERIENCES

LASA lab at EPFL Sep. 2022 – Mar. 2023

Research assistant

- Proposed a dynamically-feasible collision-free planner for manipulator throwing in constrained environments.
- Proposed heuristic sampling and collision checking methods based on neural implicit representations.
- Developed a toolkit for sample-based dynamic planning, and verified the effectiveness of the method.

Bosch Oct. 2021 – Jul. 2022

Sensor Fusion R&D Intern

- Proposed a novel end-to-end method to segment foreground that can impact the traffic and verified in real cases.
- Simulated traffic using Carla and constructed dataset tightly connected to the industrial for training and evaluation.
- Determined the KPI to evaluate the work on bounding box-based dataset to show the safety concept.
- Fused V2X sensors to provide guaranteed regional information for autonomous driving.

Hesai Technology Jul.2020 – Aug.2020

Perception Algorithm R&D Intern

- Tested various network frameworks fusing multiple frames for point cloud-based object detection.
- Improved the evaluation tool of OpenPCDet to support Waymo Dataset.

Vision4Robotics Lab at Tongji Univ. Nov. 2018 – Oct. 2020

Research assistant

- Researched CF-based methods for UAV tracking. Related works have been published in top conferences.

Tongji Univ. DIAN Racing Formula Student Electric Team Mar. 2018 – May 2020

Powertrain & Driverless Member

- Simulated mathematically motor control for independent research and development of the motor.
- Developed a Simscape-based 3-D vehicle model to simulate the motion of 4WD formula racecar.

PUBLICATIONS

- *Training-Set Distillation for Real-Time UAV Object Tracking,* **Fan Li**, Changhong Fu*, Fuling Lin, Yiming Li, and Peng Lu, In ICRA'20 [paper] [code]
- *Learning Consistency Pursued Correlation Filters for Real-Time UAV Tracking,* Changhong Fu*, Xiaoxiao Yang, **Fan Li**, Changjing Liu, and Peng Lu, In IROS'20 [paper] [code]

SKILLS

Programming	Python, Matlab, C++ (basic)	**Language**	Chinese (native), English (C1), Deutsch (B1)
Libraries	PyTorch, Sklearn	**Dev tools**	Linux, ROS, Latex