

Chensheng Peng

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EDUCATION

Shanghai Jiao Tong University (SJTU)

Sep 2019 - Jun 2023

Major: Electrical and Computer Engineering (Artificial Intelligence Field)

An undergraduate student from Department of Automation, also as a member of Zhiyuan Honors Program.

- **GPA:** 3.9 (90.4 / 100) **Rank:** 1 / 89
- Straight A's in courses concerning mathematics, programming and machine learning
- **Relevant Courses:** C++ Programming (90), Data Structure (90), Machine Learning and Knowledge Discovery (98), Robotics (95), Mathematical Analysis (91), Introduction to Pattern Recognition (94), Digital Image Processing (91)

RESEARCH EXPERIENCE

Efficient Processing of Large-Scale Point Clouds

Mar 2022 - Sep 2022

Research intern, in Autonomous Driving Group of MSC Lab,

University of California, Berkeley

- The research is mainly about scene flow prediction from large-scale point clouds.
- We achieve real-time processing of dense point clouds, adopting a dense form and a kernel-based grouping technique.
- Our proposed method outperforms recent methods both in effectiveness and efficiency.

Neural Architecture Search with Latency Constraint

Nov 2021 - Feb 2022

Program leader, in Ye's Lab of John Hopcroft Center for Computer Science,

Shanghai Jiao Tong University

- The research is mainly about searching for efficient networks with NAS methods.
- We aim for less running time of neural networks by adding latency constraint to traditional DARTs method.
- The latency of neural networks can be reduced, without much loss of accuracy.

Multiple Object Tracking based on Camera-LiDAR Fusion

Nov 2020 - Oct 2021

Group leader, in Intelligent Robotics and Machine Vision (IRMV) Lab,

Shanghai Jiao Tong University

- The research is mainly about multi-object tracking based on multi-sensor feature fusion.
- We realize effective feature fusion by exploring the spatial relation between LiDAR points and image pixels.
- We achieve high accuracy and outperform other baselines on the KITTI dataset.

PUBLICATIONS / PREPRINTS

Interactive Multi-scale Fusion of 2D and 3D Features for Multi-object Tracking

G. Wang*, C. Peng*, J. Zhang, and H. Wang (* indicates equal contributions)

The paper is submitted to IEEE Transactions on Intelligent Transportation Systems (TITS).

Efficient Scene Flow Learning for Large-scale 3D Point Clouds

C. Peng, G. Wang, X. Lo, C. Xu, M. Tomizuka, W. Zhan, and H. Wang

The paper is submitted to IEEE International Conference on Robotics and Automation (ICRA), 2023.

PROJECT EXPERIENCE

DJI RoboMaster Competition

Nov 2019 - Jan 2020

Embedded System Development

- Design, assemble, and control the robot car to complete specified tasks, such as item picking, image recognition, etc.
- Successfully entered the finals and won the first prize of the second Robomaster competition of SJTU.

ByteDance Android Mobile Development Competition

Oct 2021 - Dec 2021

Android App Development

- Cooperate with team members to develop an App similar to TikTok.
- We can play videos, login, take photos, etc. on the developed App, and finally won the third prize.

SKILLS LIST

- IT skills: Python, C++, familiar with the framework PyTorch
- Languages: Chinese (native) , English (fluent)

HONORS & AWARDS

Shanghai Scholarship, from Government of Shanghai City.

2021.11

Zhiyuan Honors Scholarship, from Zhiyuan College, SJTU.

2020.05

PERSONAL PROFILE

A highly-motivated student currently pursuing a BEng in automation, seeking to leverage my knowledge of deep learning to solve some realistic problems in autonomous driving. Through my two years of research experience in the laboratory, I have learned to work well under pressure while continuously meeting and exceeding the targets.