

# Tian Fengrui

SenseTime Research Intern, Postgraduate

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GitHub: <https://github.com/tianfr>

**Research Interest:** Computer Vision, Self-supervised Learning

Age: 23

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**English Proficiency:** TOEFL 92; CET-6 546



## EDUCATION

### B.S. in Xi'an Jiaotong University

Software Engineering

GPA: 3.6 / 4.0

**Supervisor:** [Zhiqiang Tian](#)

2017.09-2021.07

### (Recommended postgraduate) M.S. in Institute of Artificial Intelligence and Robotics, XJTU

Pattern Recognition and Intelligent Systems

**Supervisor:** [Shaoyi Du](#)

2021.09-2024.07

## RESEARCH EXPERIENCE

### Fundamental Vision Department, SenseTime, Beijing

Research Intern, **Supervisor:** [Jifeng Dai](#)

Start from 2022.03

- I will join SenseTime Research as an Intern from March, 2022.

### MEGVII Research Video Group, MEGVII, Beijing

Research Intern

2021.04-2022.02

- Currently research on fine-grained video representation with self-supervised learning (SSL);
- Responsible for maintaining SSL codebase of our group and evaluating the state-of-the-art SSL methods such as MoCo, MoSI, etc;
- Proposed a video representation learning network based on feature differences. It directly captures motion information by frame feature difference.
- Designed a video classification method based on strong-weak augmentations of videos;
- Completed the submission of one paper and two patents;
- Won the title of August Outstanding Intern in Megvii Video Department (the only one in the group);
- **Fengrui Tian** et al. Self-supervised Video Representation Learning with Frame Difference Contrasting. On Arxiv.

### Study on Hybrid Human-computer Segmentation Method for Weakly Labelled Human Organ Images, Xi'an Jiaotong University

Participant

2019.11-Present

- Dedicated to applying deep learning technology in medical image analysis to the real world by combining human interaction and segmentation algorithm;
- Focused on how to combine radiologists' interaction experience with deep learning methods;
- Proposed an interactive segmentation method that learns radiologist interaction experience by using residual corrections;
- **Fengrui Tian**, Zhiqiang Tian\*, Zhang Chen, Dong Zhang, Shaoyi Du\*. Surface-GCN: Learning Interaction Experience for Organ Segmentation in 3D Medical Images. Under review.

### Mining Communities in Big-Data with Algorithms, National University of Singapore

Team Leader

2019.07

- Organized other 3 group members to detect potential connections between movies and books with data on Douban website by data mining algorithms;
- Analyzed the relationship between 105 user groups and 8 different types of books and the relationship between 117 movies and different groups of users and then established the connection "books-users-movies" based on those 2 relationships;
- [Project in Github](#)      [Project Home Page](#)

## SKILLS, CERTIFICATES AND OTHERS

### Outstanding undergraduate thesis in Xi'an Jiaotong University (TOP 1%)

2021.6

The third prize scholarship in Xi'an Jiaotong University

2019.11, 2020.11

Bronze medal in China College Computing Contest Group (CCCC) Programming Ladder Tournament

2019.4

Outstanding Student in Xi'an Jiaotong University

2019.11, 2020.11