

# Xiangyue Liu

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## EDUCATION

### Beihang University (University of 985 Project)

*Master of Software Engineering*

**Beijing, China**

*Score: 84.94, Jun 2021*

### Northeast Normal University (University of 211 Project)

*Bachelor of Software Engineering*

**Changchun, China**

*GPA: 3.45, Jun 2018*

## KEY SKILLS

- Research Interest: 3D Scene Reconstruction, MVS, SLAM, 3D Scene Understanding, Causal Inference
- Programming: C++, Python, Matlab
- Deep Learning: PyTorch, TensorFlow
- Tools: Latex, g2o, Ceres, Eigen, OpenCV

## AWARDS AND ACHIEVEMENTS

- Second class scholarship of Northeast Normal University, Oct 2015
- National College Students Innovation and Entrepreneurship Training Program, Dec 2016
- Third class scholarship of Northeast Normal University, Nov 2017
- Third class scholarship of Northeast Normal University, Jun 2018
- Second class scholarship of Beihang University, Oct 2018
- First class scholarship of Beihang University, Oct 2019
- First class scholarship of Beihang University, Jun 2020
- 2nd Place in IJCAI-PRICAI 2020 3D AI Challenge: Instance Segmentation, Oct 2020
- Excellent graduate in Beijing, Jun 2021

## EXPERIENCE

### National Space Science Center

**Beijing, China**

#### ○ Research Group Member

*Sept 2018 - Sept 2019*

- Reconstruct the sky map from under sampled inversion astronomical matrix by using deep learning methods (conditional GANs).

### MEGVII Research

**Beijing, China**

#### ○ SLAM Intern

*Aug 2019 - Apr 2020*

- Develop new visual Simultaneous Localization and Mapping (SLAM) algorithm.
- Build a ray-point-ray feature-based stereo visual odometry (VO) by C++.

#### ○ 3D Vision Intern

*Jun 2021 - Present*

- Do research on Multi-view Stereo (MVS) with deep learning. (*Preparing for ECCV*)

### Tsinghua University

**Beijing, China**

#### ○ Visiting Student at IIIS

*Jun 2021 - Present*

- Do the research about causal inference in dynamic model. (*Preparing for ICML*)

## PUBLICATION

### TransMVSNet: Global Context-aware Multi-view Stereo Network with Transformers

*Under review*

Yikang Ding\*, Wentao Yuan\*, Qingtian Zhu, Haotian Zhang,  
**Xiangyue Liu**, Yuanjiang Wang, Xiao Liu

**Structure Reconstruction Using Ray-Point-Ray Features: Representation and Camera Pose Estimation**

ICRA 2021

Yijia He\*, Xiangyue Liu\*, Xiao Liu, Ji Zhao (\* Equal Contribution)

**2nd Place Solution to Instance Segmentation of IJCAI 3D AI Challenge 2020**

IJCAI 2020

Kai Jiang\*, Xiangyue Liu\*, Zheng Ju\*, Xiang Luo (\* Equal Contribution)

Workshop

**An Optimization Algorithm of Baseline Density Distribution for An Ultra-long Wave Astronomical Observation Array**

IAC 2020

Jingwei Yang, Juntao Pu, Xinyi Fei, Xiangyue Liu, You Song, Li Deng

## ACTIVITIES

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- Oral presentation for the IJCAI-PRICAI 2020 3D AI workshop Jan 2021
- Outstanding student of visual SLAM class at Shenlan School Aug 2019
- Volunteer of the 2nd National SLAM Technology Forum Jul 2019
- League secretary in Software College at Beihang University Sep 2018 - Jun 2021
- Recreation and sports secretary in Software College at NENU Sep 2015 - Jun 2018