Xiangyue Liu

Liuxy.com ✉ liuxiangyue@buaa.edu.cn 📱(+86)18813061728

Education

Beihang University   **September 2018 - Present**
Master of Engineering in Software Engineering   *Beijing, China*
Anticipated Graduation   *June 2021*
Northeast Normal University   **September 2014 - June 2018**
Bachelor of Engineering in Software Engineering   *Changchun, China*

Research Experience

Professor Song's Group   **September 2018 - Present**
  1. Research Project:
     - Ultra long wave astronomical observation array research project
       (funded by space science pilot project of Chinese Academy of Sciences (phase II)).
  2. Main Responsibility:
     - Analyse satellite baseline data;
     - Search literature and model the problem of reconstruct the sky map inversion matrix;
     - Conduct reconstruct the sky map inversion matrix experiments using GANs.
  3. Publication (accepted and coming soon):
     - An Optimization Algorithm of Baseline Density Distribution for An Ultra-long Wave
       Astronomical Observation Array, 71st International Astronautical Congress (IAC), **2020.**

MEGVII Research, SLAM Group   **August 2019 - April 2020**
  1. Research Project:
     - Using new structure of RPR(ray-point-ray) to build global SFM and visual SLAM.
  2. Main Responsibility:
     - Search literature;
     - Optimization of RPR (e.g. calculate reprojection error, derive Jacobi);
     - Build a global SFM system based on RPR features using C++;
     - Build a stereo SLAM system based on RPR features using C++;
  3. Publication (submitted to ICRA and waiting result):
     - Structure Reconstruction Using Ray-Point-Ray Features: Representation, Triangulation
       and camera Pose Estimation

Competition Experience

IJCAI-PRICAI 2020 3D AI Challenge: Instance Segmentation(2/599)   March 2020 - August 2020
  1. Main Responsibility:
     - Analyse data and pre-process data;
     - Search literature, models, and tricks;
     - Conduct experiments for some models and tricks (PointRend, SOLOv2, focal loss, TTA, etc);
     - Conduct experiments of post-processing data;
  2. Publication
     - 2nd Place Solution to Instance Segmentation of IJCAI 3D AI Challenge 2020, IJCAI-
       PRICAI workshop, **2020**

Research Interests

3D vision:
- Multi-view stereo(Visual SLAM , SFM)
- Local descriptor learning
- Deep Learning (especially combine traditional multi-view geometries with deep learning)

Professional Skills

- Programming: C++, Python, Matlab
- Deep Learning: Pytroch, Tensorflow
- Writing: Latex, word

Extracurricular Activities

Graduate College experience

League Secretary of graduate class in Software College   *September 2018 - Present*

Volunteer experience

Volunteer of the The 2nd National SLAM Technology Forum   *Jul 2019, Beijing*

Awards

- Outstanding Project of National Undergraduate Innovation and Entrepreneurship Training Program, NENU, Dec. 2016
- Second class scholarship, NENU, Oct. 2015
- Third class scholarship, NENU, Oct. 2016
- Second Place in the IJCAI-PRICAI 2020 3D AI Challenge: Instance Segmentation, BUAA, Oct. 2020

Recommenders

You Song   *Prof. at Beihang University*
Lv Sheng   *Assoc. Prof. at Beihang University*