

# Jie Yuan

<https://penguinfllys.github.io/penguinfllys/about>

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## EDUCATION

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- **Leibniz Universität Hannover** Hanover, Germany  
*Master of Science in Computer Science; GPA: 3.3/4.0* Oct. 2017 – Feb. 2021
- **China University of Mining and Technology** Xuzhou, China  
*Bachelor of Engineering in geodesy and geoinformatics; GPA: 3.57/4.0 (6/157)* Oct. 2013 – July. 2017

## EXPERIENCE

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- **IPI in Leibniz University** Hanover, Germany  
*Research Assitant (part-time)* May. 2019 - Apr. 2020
  - **Object Detection:** Investigation and Research on object detection of aerial images
  - **Research Paper Investigation :** Collect new papers on object detection and application on aerial images
- **Rainbow Business Solution GmbH.** Hanover, Germany  
*Office Worker/Reception (part-time)* Oct. 2018 - Jan. 2020
  - **Office Works:** Run the daily business by calling, answering and arranging meetings, organizing files, paying bills, fixing computers, routers and printers.
- **IKG in Leibniz University** Hanover, Germany  
*Labor Mentor (part-time)* Apr. 2018 - Apr. 2019
  - **Labor Supervision:** Help the students on a labor on poles detection with point cloud data.
  - **Result Examination:** Check the result of labor and homework
- **IKG in Leibniz University** Hanover, Germany  
*GUI Programmer for HD Mapping system (part-time)* Feb. 2018 - Sep. 2018
  - **GUI Design:** Design multiple interfaces under tabs for different threads with Qt5 library.
  - **Multi Threading:** Configuration of front end and back-end process in multiple tabs.
  - **Sensor Data IO:** Automatic data transferring from sensors to HD mapping system.
  - **Scene Visualization:** Visualization of a fused 3D scene of point cloud and binocular camera.
  - **Algorithm Adaptation:** Adapt some new research algorithms to the mapping system.
- **Zhonghong Geodesy Technology Research Institute** Changzhou, China  
*surveyor* Jan. 2017 - July. 2017
  - **Survey Plan Design:** Estimation of surveying accuracy and feasibility & Design of surveying schedule
  - **Result Adjustment:** Adjustment of the GPS antenna collected data & Surveying result report.

## PROJECTS

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- **Digital Earth with Web Map Service:** Icosahedron densification with grid technique visualizing large scale 3d map
- **LEGO Courier Simulation:** SLAM techniques on LEGO Robot in a scenario of a delivering task
- **Dynamic Landmark based Visual Odometry(SFM):** Motion reconstruction with feature points matching in RANSAC framework on stereo cameras
- **Object Tracking and Motion Prediction via KFs.:** Preceding cars motion prediction via Kalman filterings
- **Real-time HD Map Rectification with Multiple Lidars:** Point cloud rectification for accurate mapping system
- **Sensor fusion based on Set-membership KF:** Research project on trajectory optimization with SKF
- **PanUrban Dataset:** Semi-automatic conversion from ISPRS 2D semantic dataset to PanUrban dataset
- **Panoptic Segmentation in urban Area:** Unifying segmentation tasks on aerial images in urban area

## SKILLS

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- **Programming Languages:** C++, Python, Matlab, etc.
- **Tools:** CMAKE, ROS, PCL, OpenCV, OpenGL, Pytorch, MS Office, ArcGIS
- **Speaking Languages:** English(C1), German(B2-C1), Chinese(C2).