

# Jie Yuan

<https://penguinflys.github.io/penguinflys/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)* Sept. 2013 – July. 2017

## EXPERIENCE

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- **IPI in Leibniz University** Hanover, Germany  
*Research Assistant (part-time)* May. 2019 - Apr. 2020
  - **Research Paper Investigation:** Collection of papers on object detection and application on aerial images
  - **Algorithm Development:** Development of object detection algorithms on aerial images
- **Rainbow Business Solution GmbH.** Hanover, Germany  
*Office Coordinator(part-time)* Oct. 2018 - Jan. 2020
  - **Scheduling:** Appointments arrangement, Meeting organization, Conference Setup
  - **Office Coordination:** Business operation by calling, answering and scheduling, files archive, fixing devices.
  - **Interpretation and Translation:** Translation of key points from German to Chinese
- **IKG in Leibniz University** Hanover, Germany  
*Labor Mentor (part-time)* Apr. 2018 - Apr. 2019
  - **Labor Supervision:** Support for students on poles detection with point cloud data
  - **Result Examination:** Evaluation the result of experiments and homework
- **IKG in Leibniz University** Hanover, Germany  
*GUI Programmer for HD Mapping system (part-time)* Feb. 2018 - Sep. 2018
  - **GUI Design:** Design of 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:** Adaptation of fresh research papers to the mapping system
- **Zhonghong Geodesy Technology Research Institute** Changzhou, China  
*surveyor(intern)* Jan. 2017 - July. 2017
  - **Survey Plan Design:** Estimation of surveying accuracy and feasibility
  - **Scheduling:** Time planing on each part of surveying task
  - **Result Adjustment:** Adjustment of the GPS antenna collected data and technical 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 with feature points matching in RANSAC framework
- **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).