Mr CHEN Haojie

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Education Background

Hong Kong Polytechnic University(POLYU) *09/2021-now*

- **Major:** GEOMATICS (SURVEYING)
- **Degree:** Master
- **Curriculum**: Principles of Geographic Information Systems, Spatial Data Acquisition, Satellite Positioning & Navigation, Spatial Data Analysis & Mining, Remote Sensing Image Processing, Advanced Surveying, Advanced Photogrammetry & Computer Vision, Dissertation.

Southwest Jiaotong University (SWJTU, Project 211) *09/2016-06/2020*

- **Degree**: Bachelor of Engineering in Remote Sensing Science and Technology, AVG: 84.13/100
- **Scholarships**: The Second-class Comprehensive Scholarship (twice)
  The Third-class Comprehensive Scholarship
- **Awards**: The Provincial First Prize in 2018 May Day Mathematical Contest in Modeling
  The Provincial First Prize in 2018 Contemporary Undergraduate Mathematical Contest in Modeling
  The National Second Prize in the 10th Service Outsourcing Innovation and Entrepreneurship Competition for Chinese College Students
  The Silver Award in 2018 Ririshun Logistics Maker's Campus
  The Gold Award in the 10th SWJTU Extracurricular Innovation Experiment Competition
  The Third Prize in the 14th SWJTU Traffic Science and Technology Competition
  The First Prize in SWJTU "Gu Li Xing Qing-Shi Fei" Beautiful Essay Competition
- **Professional Skills**: Software: Erdas, ENVI, ArcGIS, CASS, MATLAB, AutoCAD, PS, AE, PR, AU
  Language: C, C++, Java, Python
- **Patents**: Obtained: Community Express Intelligent Cabinet, Outdoor Receiving Box and Delivery System for Community Delivery, UAVs for Community Delivery, Architecture and Implementation Method of 3D GIS for Community UAVs Delivery
  In Progress: Community-oriented UAVs Distribution System and Distribution Method, UAVs Route Planning Method for Community Delivery, Community-oriented UAVs Distribution System, Automatic Intelligent Cabinet for UAVs Distribution, Route Planning Method and Device for Community Delivery, Route Generation Method and Device for Community Delivery, Route Optimization Method and Device for Community Delivery, Route Recommendation Method and Device for Community Delivery, Community Logistics Interactive System

Project Experience

Key Research and Development Program of Chengdu (2019-YF05-02119-SN): **Tourism Resource Development and Route Design of Western Sichuan Linpan in the Context of Big Data** *06/2020-Present*

- Responsibilities: built Western Sichuan Linpan database, generated an algorithm and wrote code for crawling and visualizing data on Western Sichuan Linpan, and applied for a patent

Student Research Training Program (SRTP): **Technology Integration in UGVs Delivery** *04/2019-05/2020*

- Contents: researched last-mile delivery at home and abroad, designed a smart unmanned express car, established a last-mile community UGVs delivery information system, including a UGVs intelligent scheduling system, a functional renovation system of an unmanned express car and a community delivery information platform
- Responsibilities: prepared a high-precision lane-level road map, set up a background scheduling system, explored visual SLAM, undertook enterprise investigations and reported project progress

D-Fly Home Delivery *01/2019-07/2019*

- Contents: came up with a new type of UAVs delivery service, introduced the industry and market conditions of D-Fly project, formulated market segmentation and positioning strategies, 4P marketing tactics as well as investment and financing strategies, proposed UAVs delivery standards, adopted an integrated mode of the interactive system and the distribution system, used a WeChat mini program as the interactive system, built a back administration module with Java EE, monitored the schedule through UAVs regulation cloud system and information platform and improved the technical capabilities of UAVs
- Responsibilities: developed a 3D geographic information database for community-oriented distribution and applied for patents

A Last-mile Community Information Interactive System for Heavy-cargo Logistics *10/2018-06/2019*

- Contents: designed a two-way interactive system covering buyers and deliverymen and collected information on last-mile delivery
- Responsibilities: planned the project, took charge of WeChat mini program front end development and interface definition and built an iterative geographic information database for community-oriented last-mile delivery
- Achievements: won the Silver Award in 2018 Ririshun Logistics Maker's Campus and the Gold Award in the 10th SWJTU Extracurricular Innovation Experiment Competition

A Data Large Screen Interactive System Based on Data Analysis and Visualization Technology *10/2018-05/2019*

- Contents: analyzed the disadvantages of current big data websites, generated user-specific configuration documents through semi customization, edition algorithms, Hive algorithms and aggregate functions, carried out data visualization & presentation, provided a cloud database management system, made intelligent recommendations for proper industrial data visualization templates and conducted a project feasibility analysis
- Responsibilities: served as a project leader, made the project plan, arranged assignments and controlled project progress; put forward a generalization semi customization algorithm, built distributed clusters and backend interfaces based on Java EE and participated in frontend web design, interface definition and the secondary encapsulation of ECharts diagrams
- Achievement: won the National Second Prize in the Tenth Service Outsourcing Innovation and Entrepreneurship Competition for Chinese College Students

Buildings Extraction in Urban Areas Based on LiDAR Data and High-resolution Aerial Imagery *04/2018-04/2019*

- Contents: achieved the extraction of buildings by combining the high-resolution aerial image with LiDAR point cloud data and making full use of morphological theory, and utilized the classification algorithm of machine learning to realize the automatic extraction of buildings by training samples with the method of SVM
- Responsibilities: acted as a project leader, planned the project, monitored project schedules and assigned tasks; proposed to use SVM as the classifier, probed into and applied relevant algorithms and wrote the underlying code for texture features extraction with MATLAB

Internship Experience

Research Assistant, **School of Transportation and Logistics, Southwest Jiaotong University** *06/2020-Present*

- Probed into the application of homomorphic encryption algorithm in the CR railway blockchain platform
- Crawled data, collected materials and conducted initial investigations for multiple research projects

Intern, **Southwest Jiaotong University** *07/2019-07/2019*

- Researched remote sensing inversion of chlorophyll-a concentration in Lake Taihu
- Drew road paths and water areas with ENVI according to given two images of Shenzhen, performed the computer auto-classification and evaluated the accuracy of auto-classification
- Made a 1:2000 thematic map of aerial photography of Xipu campus of Southwest Jiaotong University

Intern**, Chengdu Hui Zhong Tian Zhi Technology Co., Ltd.** *07/2018-07/2018*

- Recorded, checked and classified voice data and wrote a script program for data processing

Intern, **Southwest Jiaotong University** *07/2018-08/2018*

- Carried out the second-order leveling, the second-order traverse survey and RKT survey, made level and traverse adjustment computations, and designed and wrote C# software and level adjustment software

Intern, **Southwest Jiaotong University** *07/2017-08/2017*

- Did the third-order leveling, the second-order traverse survey and detail survey and took advantage of CASS software for 1:500 scale mapping