

# Curriculum Vitae

(Updated on Mar 21, 2022)

## Zhen Qian

Personal Website | Google Scholar | ResearchGate | Email

Nanjing Normal University, No.1, Wenyuan Road, Xianlin University District, Nanjing, China

### EDUCATION

- **M.S** in Cartography and Geographic Information System Overall GPA: 3.81/4.0, Top 3% Sept., 2020-Jun., 2023  
**School of Geography, Nanjing Normal University** (Expected)
- **B.S** in Geographic Information Science Overall GPA: 3.77/4.0, Top 1% Sept., 2016-Jun., 2020  
**School of Geographical Science, Nantong University**

### RESEARCH INTERESTS

Spatial Data Mining, Computer Vision, Machine learning, Deep Learning, GIScience, Geographic Modeling

### PUBLICATIONS

- **Qian, Z.**, Chen, M., Yang, Y., Zhong, T., Zhang, F., Zhu, R., Zhang, K., Zhang, Z., Sun, Z., Ma, P., Lü, G., Ye, Y. and Yan, J., 2022. Vectorized dataset of roadside noise barriers in China using street view imagery. *Earth System Science Data*. (Under Review, IF 11.333, JCR Q1)
- **Qian, Z.**, Chen, M., Zhong, T., Zhang, F., Zhu, R., Zhang, Z., Zhang, K., Sun, Z. and Lü, G., 2022. Deep Roof Refiner: A detail-oriented deep learning network for refined delineation of roof structure lines using satellite imagery. *International Journal of Applied Earth Observation and Geoinformation*, 107, p.102680. (IF 5.933, JCR Q1) DOI: [10.1016/j.jag.2022.102680](https://doi.org/10.1016/j.jag.2022.102680)
- **Qian, Z.**, Liu, X., Tao, F. and Zhou, T., 2020. Identification of urban functional areas by coupling satellite images and taxi GPS trajectories. *Remote Sensing*, 12(15), p.2449. (IF 4.848, JCR Q1) DOI: [10.3390/rs12152449](https://doi.org/10.3390/rs12152449)
- **Qian, Z.**, Zhou, T., Tao, F., Fan, Z., Liu, H. and Lu, J., 2020. Cluster-Based Extraction Method of Entrances and Exits in AOI. *Geography and Geo-Information Science*, 36(2), pp.1-7. (In Chinese, Chinese Core Journals) DOI: [10.3969/j.issn.1672-0504.2020.02.001](https://doi.org/10.3969/j.issn.1672-0504.2020.02.001)
- **Qian, Z.**, Zhou, T., Ma, P., Tao, F. and Liu, H., 2019. A Detection Method for Passenger Safety Based on GIS. *Journal of Transport Information and Safety*, 37(4), pp.35-43. (In Chinese, Chinese Core Journals) DOI: [10.3963/j.issn.1674-4861.2019.04.005](https://doi.org/10.3963/j.issn.1674-4861.2019.04.005)
- **Qian, Z.**, Zhou, T., Kang, T., Fan, Z. and Lu, J., 2018. Study on Discrimination Method of Urban Road Congestion Based on Taxi. *Logistics Engineering and Management*, 40(02), pp.118-120+112. (In Chinese) DOI: [10.3969/j.issn.1674-4993.2018.02.042](https://doi.org/10.3969/j.issn.1674-4993.2018.02.042)
- Zhang, K., **Qian, Z.**, Yang, Y., Chen, M., Zhong, T., Zhu, R., Lv, G. and Yan, J., 2022. Using street view images to identify road noise barriers with ensemble classification model and geospatial analysis. *Sustainable Cities and Society*, 78, p.103598. (IF 7.587, JCR Q1) DOI: [10.1016/j.scs.2021.103598](https://doi.org/10.1016/j.scs.2021.103598)
- Zhang, Z., **Qian, Z.**, Zhong, T., Chen, M., Zhang, K., Yang, Y., Zhu, R., Zhang, F., Zhang, H., Zhou, F., Yu, J., Zhang, B., Lü, G., Yan, J., 2022. Vectorized rooftop area data for 90 cities in China. *Scientific Data*, 9, 66. (IF 6.444, JCR Q1) DOI: [10.1038/s41597-022-01168-x](https://doi.org/10.1038/s41597-022-01168-x)
- Zhou, T., Liu, X., **Qian, Z.**, Chen, H. and Tao, F., 2020. Automatic identification of the social functions of areas of interest (AOIs) using the standard hour-day-spectrum approach. *ISPRS International Journal of Geo-Information*, 9(1), p.7. (IF 2.899, JCR Q2) DOI: [10.3390/ijgi9010007](https://doi.org/10.3390/ijgi9010007)
- Zhou, T., Liu, X., **Qian, Z.**, Chen, H. and Tao, F., 2019. Dynamic update and monitoring of AOI entrance via spatiotemporal clustering of drop-off points. *Sustainability*, 11(23), p.6870. (IF 3.251, JCR Q2) DOI: [10.3390/su11236870](https://doi.org/10.3390/su11236870)
- Zhong, T., Zhang, K., Chen, M., Wang, Y., Zhu, R., Zhang, Z., Zhou, Z., **Qian, Z.**, Lv, G. and Yan, J., 2021. Assessment of solar photovoltaic potentials on urban noise barriers using street-view imagery. *Renewable energy*, 168, pp.181-194. (IF 8.001, JCR Q1) DOI: [10.1016/j.renene.2020.12.044](https://doi.org/10.1016/j.renene.2020.12.044)

## HONORS & AWARDS

### Contests

- National Graduate Student Mathematical Modeling Competition 2020  
**Second Prize, Team Leader**
- National Innovation and Entrepreneurship Competition of Intelligent Transportation 2019  
**Second Prize**
- National Professional Software Engineering "Blue Bridge Cup" Design Contest 2019  
**Third Prize, Individual**
- Jiangsu Provincial Professional Software Engineering "Blue Bridge Cup" Design Contest 2019  
**First Prize, Individual**
- Beidou-Cup Adolescents Science & Technology Invention Contest in East China 2019  
**Second Prize, Team Leader**
- COMAP's Mathematical Contest in Modeling 2018  
**Meritorious Winner, Team Leader**
- National Undergraduate GIS Application Skills Contest 2018  
**First Prize, Team Leader**
- National Innovation and Entrepreneurship Competition of Intelligent Transportation 2018  
**Third Prize, Team Leader**
- Jiangsu Provincial Mapping and GIS Innovation and Entrepreneurship Competition 2018  
**Second Prize, Team Leader**
- Jiangsu Provincial Computer Design Competition for College Students 2018  
**Second Prize**
- National Undergraduate GIS Application Skills Contest 2017  
**First Prize**
- Jiangsu Provincial Mapping and GIS Innovation and Entrepreneurship Competition 2017  
**Grand Prize, Team Leader**

### Scholarships

- First-class Scholarship in University for Postgraduates, **Top 3%** 2020 & 2021
- National Scholarship for Undergraduates, **Top 1%** 2018
- The Prince's Scholarship Funded by Social Enterprises for Undergraduates, **Top 1%** 2017 & 2019
- First-class Scholarship in University for Undergraduates, **Top 1%** 2017, 2018 & 2019

### Honors

- Outstanding Student Leaders in University for Postgraduates, **Top 1%** 2021
- Excellent Graduation Design (Thesis) in Jiangsu for Undergraduates, **Top 1%** 2021
- Excellent Graduation Thesis of Surveying and Mapping in Jiangsu for Undergraduates, **Top 1%** 2020
- Outstanding Student Leaders in Jiangsu for Undergraduates, **Top 1%** 2019
- Merit Student Pioneer in University for Undergraduates, **Top 1%** 2018
- Outstanding Student Leaders in University for Undergraduates, **Top 1%** 2017 & 2019

## EXPERIENCES

### Research Projects

- Jiangsu Provincial Graduate Research and Practice Innovation Program: **"Research on spatial intelligence analysis method considering knowledge of geographic mechanisms"**, funded by Department of Education, Jiangsu Province, P.R. China, **Individual** 2022-Present
- Jiangsu Provincial College Students' Innovative Entrepreneurial Training Plan Program: **"Research on travel behavior supervision method based on artificial intelligence technology"**, funded by Department of Education, Jiangsu Province, P.R. China, **Team leader** 2018-2019
- National College Students' Innovative Entrepreneurial Training Plan Program: **"Design and application of intelligent scenic spot regulation model based on visitor trajectory"**, funded by 2017-2018

Ministry of Education, P.R. China, **Core member and developer**

#### **Academic Activities**

- Oral presentation at the 8<sup>th</sup> National Academic Conference on Virtual Geographic Environment, titled **“Roof structure line delineation based on deep learning and high-resolution satellite imagery”**, Apr., 2022  
(Expected)  
Ganzhou, Jiangxi Province, P.R. China

#### **Teaching Experiences**

- Teaching assistant for **“Spatio-temporal big data analysis methods”** and taught class session **“Spatial intelligence analysis for big data in the new era”** Nov., 2021
- Teaching assistant for **“Spatial data structure”** Sept., 2018
- Teaching assistant for **“Fundamentals of GIS algorithms”** May, 2018
- Teaching assistant for **“C/C++ language programming”** Sept., 2017

### **SKILLS & ACTIVITIES**

#### **Language**

Mandarin (Native), English (Professional Proficiency, IELTS score: \*, Delayed due to COVID-19)

#### **Programming**

Python (Proficient, including Numpy, Pandas, Matplotlib, GDAL, OpenCV, Pytorch, etc.), R, Matlab, Server (MacOS/Window/Ubuntu), C++, Java, Html/Css/Javascript

#### **Software**

ArcGIS, QGIS, SPSS, Envi, Photoshop, EndNote, Microsoft Office

#### **Certifications & Training**

Data science and face recognition algorithms winter camp (2 weeks), National geographic analysis model training (1 month)