

# Zhen Qian

 [Personal Website](#) |  [Google Scholar](#) |  [Research Gate](#) |  [Email](#)

**Address:** 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 Sept., 2020-Jun., 2023  
(Top National Discipline, ranked Top1% in China) (Ranked Top 3%) (Expected)  
**School of Geography, Nanjing Normal University**
- **B.S** in Geographic Information Science Overall GPA: 3.77/4.0 Sept., 2016-Jun., 2020  
(Top Provincial Discipline) (Ranked Top 1%)  
**School of Geographical Science, Nantong University**

## RESEARCH INTERESTS

GIScience, Remote Sensing, Spatial Data Mining, Machine learning, Deep Learning

## 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 Discussions, pp.1-30. (Preprint, Under Review, IF 11.815, JCR Q1) [PDF] [DOI]
- **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 7.672, JCR Q1) [PDF] [DOI]
- **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 5.349, JCR Q1) [PDF] [DOI]
- **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) [PDF] [DOI]
- **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) [PDF] [DOI]
- **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) [PDF] [DOI]
- 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 10.696, JCR Q1) [PDF] [DOI]
- 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 8.501, JCR Q1) [PDF] [DOI]
- 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 3.099, JCR Q2) [PDF] [DOI]
- 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 3.889, JCR Q2) [PDF] [DOI]
- 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 8.634, JCR Q1) [PDF] [DOI]

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

## Honors

- Outstanding Communist Youth League Student Leaders in University for Postgraduates 2022  
**Ranked Top 1%**
- Outstanding Student Leaders in University for Postgraduates 2021  
**Ranked Top 1%**
- Excellent Graduation Design (Thesis) in Jiangsu for Undergraduates 2021  
**Ranked Top 1%**
- Excellent Graduation Thesis of Surveying and Mapping in Jiangsu for Undergraduates 2020  
**Ranked Top 1%**
- Outstanding Student Leaders in Jiangsu for Undergraduates 2019  
**Ranked Top 1%**
- Merit Student Pioneer in University for Undergraduates 2018  
**Ranked Top 1%**
- Outstanding Student Leaders in University for Undergraduates 2017 & 2019  
**Ranked Top 1%**

## 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 Ministry of Education, P.R. China, **Core member and developer** 2017-2018

### 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**”, Ganzhou, Jiangxi Province, P.R. China July, 2022 (Expected)

### 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: 6.5)

### Programming

Python (Proficient, including OpenCV, Pytorch, Numpy, Pandas, Matplotlib, GDAL, 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)