

Zhen Qian

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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

RESERCH 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 11.333, 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 5.933, 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 4.848, 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 7.587, 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 6.444, 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 2.899, 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 3.251, 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 8.001, JCR Q1*) [[PDF](#)] [[DOI](#)]

HONORS & AWARDS

Contests

| | |
|---|-------------------|
| ● National Graduate Student Mathematical Modeling Competition Second Prize, Team Leader | 2020 |
| ● National Innovation and Entrepreneurship Competition of Intelligent Transportation Second Prize | 2019 |
| ● National Professional Software Engineering "Blue Bridge Cup" Design Contest Third Prize, Individual | 2019 |
| ● Jiangsu Provincial Professional Software Engineering "Blue Bridge Cup" Design Contest First Prize, Individual | 2019 |
| ● Beidou-Cup Adolescents Science & Technology Invention Contest in East China Second Prize, Team Leader | 2019 |
| ● COMAP's Mathematical Contest in Modeling Meritorious Winner, Team Leader | 2018 |
| ● National Undergraduate GIS Application Skills Contest First Prize, Team Leader | 2018 |
| ● National Innovation and Entrepreneurship Competition of Intelligent Transportation Third Prize, Team Leader | 2018 |
| ● Jiangsu Provincial Mapping and GIS Innovation and Entrepreneurship Competition Second Prize, Team Leader | 2018 |
| ● Jiangsu Provincial Computer Design Competition for College Students Second Prize | 2018 |
| ● National Undergraduate GIS Application Skills Contest First Prize | 2017 |
| ● Jiangsu Provincial Mapping and GIS Innovation and Entrepreneurship Competition Grand Prize, Team Leader | 2017 |
| Scholarships | |
| ● First-class Scholarship in University for Postgraduates Ranked Top 3% | 2020 & 2021 |
| ● National Scholarship for Undergraduates Ranked Top 1% | 2018 |
| ● The Prince's Scholarship Funded by Social Enterprises for Undergraduates Ranked Top 1% | 2017 & 2019 |
| ● First-class Scholarship in University for Undergraduates Ranked Top 1% | 2017, 2018 & 2019 |
| Honors | |
| ● Outstanding Communist Youth League Student Leaders in University for Postgraduates Ranked Top 1% | 2022 |
| ● Outstanding Student Leaders in University for Postgraduates Ranked Top 1% | 2021 |
| ● Excellent Graduation Design (Thesis) in Jiangsu for Undergraduates Ranked Top 1% | 2021 |
| ● Excellent Graduation Thesis of Surveying and Mapping in Jiangsu for Undergraduates Ranked Top 1% | 2020 |
| ● Outstanding Student Leaders in Jiangsu for Undergraduates Ranked Top 1% | 2019 |
| ● Merit Student Pioneer in University for Undergraduates Ranked Top 1% | 2018 |
| ● Outstanding Student Leaders in University for Undergraduates Ranked 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 Ministry of Education, P.R. China, **Core member and developer** 2017-2018

Academic Activities

- Oral presentation at the 8th 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)