

Zhen Qian

🌐 Personal Website ([click](#)) | 📄 Google Scholar ([click](#)) | 📄 Research Gate ([click](#)) | ✉ Email ([click](#))

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

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 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 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 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 Apr., 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: *, 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)