Jiale GUO

GUO jiale.guo@mail.polimi.it GuojialeGeographer/Github

EDUCATION EXPERIENCE

Politecnico di Milano (Italy), M.S. in Geoinformatics Engineering

ChuZhou University (China), B.A. in Geography

09.2024 - Present 09.2017 - 06.2021

RESEARCH EXPERIENCE

Runoff simulation and prediction in the Qinghai Lake basin based on the SWAT model

Research Assistant (Chinese Academy of Sciences)

10.2021 - 06.2022

- Simulated and predicted multi-year variation rules of water resources in the Qinghai Lake Basin based on the SWAT model.
- Performed data analysis and mapping by leveraging remote sensing for data analysis and interpretation.

Spatial-temporal Evolution and Trend Analysis of Drought Disasters in the Jianghuai Watershed Region

Undergraduate Thesis (Chuzhou University)

01.2021 - 05.2021

- Computed the Standardized Precipitation Evapotranspiration Index (SPEI) as an indicator for drought evaluation.
- Explored the spatial-temporal change characteristics and future trends of meteorological drought in the Jianghuai watershed area based on EOF, M-K test, Wavelet Analysis, and Spatial Analysis methods.

Spatial-temporal pattern mining of PM2.5 pollution in China and analysis of its driving mechanisms

Research Assistant (Geoinformation Lab, Chuzhou University)

01.2020 - 06.2021

- Leveraged 3D GIS technology and the space-time cube model, and employed spatial-temporal hotspot data analysis methods, to examine the spatial-temporal evolution trends and distribution patterns of PM2.5 in China.
- The impacts of natural and socio-economic factors on PM2.5 using the Geodetector and Geographically Weighted Regression models.

On the Remote Sensing Classification of Tree Species Based on Multi-scale Feature Transfer Learning

Research Assistant (Remote Sensing and Big Data Analysis Lab, Chuzhou University)

06.2018 - 12.2019

- Utilized QuickBird high-resolution remote sensing imagery, a tree species classification model with high accuracy was developed.
- Combined multi-scale segmentation algorithms and transfer learning to achieve high-precision identification and classification of forest tree species.

WORK EXPERIENCE

Industrial Park Surveying and Mapping Geographic Information Technology Co., Ltd.

Suzhou, China

Geographic Information Data Engineer

01.2023 - Present

- Manipulate high-definition remote sensing images of suzhou City, to determine the scope of forests, grasslands, and wetlands, and carry out the segmentation and processing of the identified patches.
- Inductive reasoning, analysis, and understanding of natural resource data, such as land use data and remote sensing images, conduct to design innovative solutions based on practical needs.

Chuzhou Municipal Public Utility Engineering Co., Ltd. (Urban Water Supply)

Chuzhou, China

Graduation Internship

03.2021 - 05.2021

- Used GPS to collect geospatial positional data of urban drainage pipes, perform data cleaning and preprocessing, conduct geospatial buffer analysis, and create map visualizations.
- Analyzed the residential coverage of the current plan of pipelines, and designed a reasonable geospatial optimum coverage scheme.

Anhui Engineering Laboratory of Geo-information Smart Sensing and Services Internship

Chuzhou, China 05.2019 - 12.2019

- Utilized ArcGIS, CAD, for spatial data collection, processing, analysis, mapping.
- Conducted aerial image data collection and data processing using unmanned aerial vehicles (drones).

PEER-REVIEWED PUBLICATIONS

- Li, J., Li, R., Zhang, M., *Guo*, *J.*, Shi, L., & Guo, A. (2021). Study on characteristics of temporal and spatial evolution of rural settlements in typical land consolidation counties—Taking Dingyuan County of Anhui Province as an example. *Journal of Jiangsu Agricultural Sciences* (17), 202-208. In Chinese *Doi:10.15889/j.issn.1002-1302.2021.17.036*.
- Wang, N., Min, J., *Guo*, *J.*, & He, N. (2021). On the Remote Sensing Classification of Tree Species Based on Multi-scale Feature Transfer Learning. *Journal of Ezhou University* (02), 93-97. In Chinese *Doi:10.16732/j.cnki.jeu.2021.02.031*.
- Cao, X., Zhou, L., Dai, S., *Guo*, *J.*, & Ju, X. (2020). Analysis of spatial pattern and effect of the farm pond system in Jianghuai watershed area. *Journal of Heilongjiang Institute Of Technology* (06), 14-22. In Chinese *Doi:10.19352/j.cnki.issn1671-4679.2020.06.003*.

HONORS & COMPETITIONS

• "Esri" College Students GIS Software Development Competition in China, Third Prize	2022
• GIS Skills Competition for College Students in Anhui Province, Second Prize	2019 - 2020
• The 5th China University Geography Science Exhibition Competition, Third Prize	2019
• Excellent Graduation Thesis of Chuzhou University (Top 3%)	2021
• Excellent Graduates of Ordinary Colleges and Universities in Anhui Province (Top 2%)	2021
 National Encouragement Scholarship, Education Department of Anhui Province (Top 3%) 	2020
• Excellent Interns & Internship Works (Top 10%)	2019
Academic Excellence Scholarship (Three consecutive years)	2017 - 2020
• Outstanding Student Cadres (Three consecutive years)	2017 - 2020

OTHER SKILLS

Programming: Python, R, LaTex

Software: ArcGIS Pro, Google Earth Engine, QGIS, PostgreSQL

Languages: English (fluent)