# Jiale GUO

#### jiale.guo@foxmail.com GuojialeGeographer (github.com)

#### **EDUCATION EXPERIENCE**

## ChuZhou University, Bachelor of Science in Geography

**GPA:** 84.85/100; **Ranking:** 3/60 (2017 - 2018); 8/56 (2018 - 2019); 1/56 (2019 - 2020)

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)