

Zhi Zheng

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Education and Work Background

1. Universiti Putra Malaysia	Serdang, Malaysia
Master of Remote Sensing and GIS, GPA: 3.688/4	Mar.2024-NOW
2. Northeast Institute of Geography and Agroecology Chinese Academy Of Sciences	Changchun, China
Research Assistant, Supervisor: Jia Du	May.2022- May.2024
3. Heilongjiang Institute of Technology	Harbin, China
Bachelor of Engineering, Remote Sensing Science and Technology, GPA:85.05/100	Sep 2017-Jun 2021

Publications

Journal:

1. Du, J., Jacinthe, P.-A., Song, K., Zhang, L., Zhao, B., Liu, H., Wang, Y., Zhang, W., **Zheng, Z.**, Yu, W., Zhang, Y., & Jiang, D. (2024). Maize crop residue cover mapping using Sentinel-2 MSI data and random forest algorithms. *International Soil and Water Conservation Research*. <https://doi.org/10.1016/j.iswcr.2024.09.004>
2. Sawut, M.; Li, W.; Cui, J.; & **Zheng, Z.** (2024). Hyperspectral inversion of chlorophyll content in cotton based on spectral processing method. *Cotton Science*, 36(4), 87-100. <https://doi.org/10.11963/cs20230020>
3. Du, J., Li, D., Song, K., **Zheng, Z.**, & Wang, Y. (2023). Comparative analysis of the impact of two common residue burning parameters on urban air quality indicators. *Remote Sensing*, 15(3911). <https://doi.org/10.3390/rs15153911>
4. Li, J., Liu, H., Du, J., Cao, B., Zhang, Y., Yu, W., Zhang, W., **Zheng, Z.**, Wang, Y., Sun, Y., et al. (2023). Detection of smoke from straw burning using Sentinel-2 satellite data and an improved YOLOv5s algorithm. *Remote Sensing*, 15(2641). <https://doi.org/10.3390/rs15102641>
5. Li, J., Yu, W., Du, J., Song, K., Xiang, X., Liu, H., Zhang, Y., Zhang, W., **Zheng, Z.**, Wang, Y., et al. (2023). Mapping maize tillage practices over the Songnen Plain in Northeast China using GEE cloud platform. *Remote Sensing*, 15(1461). <https://doi.org/10.3390/rs15051461>
6. Bai, H., **Zheng, Z.**, Zhang, Y., Huang, H., & Wang, L. (2021). Comparison of satellite-based PM2.5 estimation from aerosol optical depth and top-of-atmosphere reflectance. *Aerosol and Air Quality Research*, 21(200257). <https://doi.org/10.4209/aaqr.2020.05.0257>

Conference:

1. **Zheng Zhi**, Bai Heming, Analysis of the spatial and temporal distribution of total aerosols in China based on MERRA-2 remote sensing assimilation data, The Fifth Quantitative Remote Sensing Academic Conference, 6.27-29.2021, Exhibition Poster

Others:

1. Prediction and analysis system for the impact of environmental air in the fresh moment, Copyright Holder, registration number: 2020SR0533459;

Participate in Projects

1. **Strategic pioneering science and technology special project of “Black land protection and utilization science and technology innovation project” (Participate)** May.2022
 - Data collection using drones and production of data products (FPAR, nitrogen content and chlorophyll inversions)
 - Regional inversion of flooding in Jilin Province, China based on Sentinel-1A data from the GEE platform
 - Research tasks related to crop residue cover and conservation tillage mapping
2. **Temporal and Spatial Distribution of Aerosols In China Based on The Assimilation Data of Merra-2** Mar 2021
 - Combining the two evaluation indexes of correlation coefficient and root mean square error with AERONET data, the AOD data of MERRA-2 reanalysis data have good applicability in the Chinese region.
 - Analysis of the spatial and temporal distribution of various types of aerosols in China based on MERRA-2 data
 - Assessment of aerosol trends in the Chinese region based on trend analysis
3. **PM2. 5 Prediction Based on Random Forest Algorithm** Sep 2019
 - Developed a Random Forest model with Sklearn for predicting AQI, optimizing hyperparameters with GridSearch.
 - This project received 72 stars, and 22 Fork on [github](#).

Academic Events

The 2nd "Atmospheric Remote Sensing and Remote Sensing Summer Study Course"	
Fudan University	2022.8.27-9.3
The Fourth Quantitative Remote Sensing Summer School	
Wuhan University	2022.7.05-13
The 11th Land Surface Satellite Remote Sensing Data Inversion Theory and Method Summer School (Excellent Camper)	
Beijing Normal University	2021.7.19-25
International Geographic Information Summer School (Night Remote Sensing)	
Wuhan University	2020.8.24-31
Quantitative Remote Sensing" Summer Postgraduate Course (Test score:84/100)	
Peking University	2020.7.25-30
The 10th Land Surface Satellite Inversion Theory and Method Summer School	
Beijing Normal University	2020.7.13-19
Applied Energy Summer Camp (2019)	
Tsinghua University	2019.7.18-27
International Geographic Information Summer School (Machine Learning)	
Wuhan University	2019.7.01-07
The application of remote sensing in weather, climate, and environment and the interaction of aerosol-cloud-precipitation	
Beijing Normal University	2018.8.13-17
High-end Forum and Summer School on the Progress and Frontier of Remote Sensing Mapping	
Nanjing University of Information Science and Technology	2018.8.06-10

Honors and Awards

1. **First prize** in the Northeast Three Provinces Mathematical Contest in Modeling (Provincial) 2020.7
2. **Third Prize** in China University Students Mathematical Contest in Modeling (Provincial) 2019.9
3. **Second Prize** in China University Students Mathematical Contest in Modeling (Provincial) 2018.9
4. **First prize** in the Northeast Three Provinces Mathematical Contest in Modeling (Provincial) 2018.7

Professional Services

Journal Reviewer:

Machine Learning: Science and Technology; Measurement Science and Technology; Engineering Research Express; Physica Scripta.

Skills and Languages

Computer Skills: C#, MATLAB, Python, HTML, JS, CSS, MS Office

Language: Chinese(Native), English(Fluency, IELTS 7.5)