

WEIYE HUANG

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🎓 EDUCATION

Lanzhou University, Lanzhou, China 2020 – Present

M.S. in Agricultural Economic Management, expected June 2023, **Score:** 89.04/100, **Tutor:** Wenlong Li

Research orientation: Hyperspectral Remote Sensing and Machine Learning

Graduation project: Grassland ecosystem monitoring based on multi-source remote sensing data,

Central South University, Changsha, China 2016 – 2020

B.S. in Information Management and Information System, **Score:** 89.63/100, **Tutor:** Xiaohong Chen(Academician)

Graduation project: Data analysis of online repair platform of Central South University

🔗 RESEARCH INTERESTS

- Data Mining and Environmental Management
- Remote Sensing and Geographic Information System

👥 EXPERIENCE

Dynamic monitoring of natural grassland ecosystem on Qinghai-Tibet Plateau based on hyperspectral remote sensing 2020 – Present

Project Leader Individual Project

- Lead a team to complete the field data acquisition task carried out by drones and spectrometers
- Construct a interpretable high-dimensional regression model of grassland biomass
- Propose a new monitoring method for grassland diversity using imbalanced multi-label data classification
- Plan to monitor grassland ecosystem changes based on multi-source spatio-temporal data

GDP forecast based on night light remote sensing data 2021

Project Leader Individual Project

- Use DMSP-OLS night light data to analyze and forecast the GDP data of some countries from 1992 to 2020
- Build a four-layer convolutional neural network baseline model, the loss of the test set is close to 0

Online product review recommendation mechanism based on data mining 2018 – 2019

Project Leader Team work Project

- Evaluate the quality of online product reviews using natural language processing
- Summarize the main content of comments, screen out the key comments
- The project was approved by Central South University and funded by 8000 yuan

📖 PUBLICATIONS

- Huang, W., et al., 2022. Hyperspectral Monitoring Driven by Machine Learning Methods for Grassland Above-Ground Biomass. *Remote Sensing* 14, No. 9: 2086. <https://doi.org/10.3390/rs14092086>
- Huang, W., Guan, K.*, Hu, Y., Classification of small sample vegetation based on hyperspectral remote sensing and transfer learning. *Remote Sensing of Environment*. SCIE-Q1. Under Review.
- Huang, W., et al., Grassland function groups recognition based on hyperspectral remote sensing and machine learning. *Remote Sensing of Environment*. SCIE-Q1. Ready to Submit.
- Complex spectral classification based on GAN and semi-supervised learning. Working Paper
- General hyperspectral inversion model based on dual channel convolutional neural network. Working Paper

⚙ SKILLS

- Programming Languages: Python, Matlab, R, SQL, C, Java, C #
- Mathematical knowledge: Calculus, Linear algebra, Statistics, Operational research, Discrete mathematics
- Abilities: Data Science, Machine Learning (Feature engineering), Deep Learning (CNN,GAN,GNN)
- Tools (Win/Linux): Pytorch, Keras, Tensorflow, Sklearn, Im-sklearn, Seaborn, MMDet , Statsmodels
- Computer Vision (CV): Image classification, Instance segmentation, Object detection, OCR
- Interest Areas: Signal Processing, Time Series, Recommendation System (RSs), Spatio-Temporal Analysis

🏆 COMPETITIONS

44 th /1255 Prize, Tabular Playground Series (Kaggle)	2022
26 th /788 Prize, Cattle image instance segmentation(CV)	2022
87 th /1300 Prize, Image and text matching based on e-commerce platform data(CV)	2022
118 th /1149 Prize, Real scene tamper image detection challenge (CV, Tianchi)	2022
111 th /1758 Prize, Fault diagnosis based on large-scale logs (NLP, Tianchi)	2022
147 th /2058 Prize, Large-scale e-commerce graph on the risk of commodity detection (GNN, Tianchi)	2022
65 th /991 Prize, Iqiyi user retention rate forecast (RSs)	2022
70 th /1529 Prize, Xiamen International Bank financial innovation competition(RSs)	2022

🎓 SCHOLARSHIP

First-class Scholarship of Lanzhou University	2020
National Encouragement Scholarship	2018
Second-class Scholarship of Central South University (Top 12 %)	2018
National Grants	2017,2019
Third-class Scholarship of Central South University	2017,2019
Encouragement Scholarship of Fujian Green Ribbon Public Education Fund	2016,2017

♡ HONORS AND AWARDS

Outstanding Party Member of Lanzhou University	2021
Outstanding Student of Central South University	2018
Third Prize for the MatherCup Mathematical Modeling	2022
H Award of American Mathematical Contest in Modeling	2018
Bronze Award of China College Students' Entrepreneurship Competition (Hunan Division)	2018
Champion of the Central South University Football League	2018
Certificate of the CDA data analyst	2018

💎 SELF-ASSESSMENT

- Self-supervised, Self-training, Self-attention, Self-distillation
- Multi-task, Multi-view, Multi-model, Multi-stream

📄 MISCELLANEOUS

- National football referee, Second class
- Excellent campers of the Cross-Strait Youth Day Leaders' Camp (National Level)
- Beijing Zhongguancun Science Innovation Training Camp (Public Expense)
- Data-driven Intelligent Decision Making and Management International Summer School (Zhejiang University)