

Yinan FENG (Personal Website)

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EDUCATION

PhD

University of Tennessee
School of Art and Science
Major: Geography
Advisor: Dr. Qiusheng Wu

Knoxville, Tennessee
01/2023 - NOW

Master

Ohio State University
School of Environmental and Natural Resources
Major: Environmental Science
Committee Member: Dr. Kaiguang Zhao (Advisor), Dr. Gil Bohrer,
Dr. Desheng Liu

Columbus, Ohio
09/2018 - 12/2020

Undergraduate

Liaoning University of Technology
School of Chemical & Environmental Engineering
Major: Environmental Science

Jinzhou, Liaoning
09/2014 - 06/2018

RESEARCH & INTERN

Current Research

I develop the US Building Footprint (USBF) dataset using aerial imagery, elevation and selective refinement of GlobalBuildingAtlas footprints. The published six-state update contains 25.1 million buildings, retaining source heights, original geometry and edit provenance. I also designed US Buildings, an interactive website for footprint and height exploration, dataset comparison, 2D/3D visualization and data export. [Dataset](#). [Website](#).

Graduate Research Intern — National Building Energy Model (NBEM) Team, Oak Ridge National Laboratory (ORNL)

As a participant in the Graduate Research Opportunities (GRO) Program, I am working with the NBEM team at ORNL on enhancing the accuracy of the AutoBEM model through building footprint calibration. My work focuses on integrating existing building footprint datasets with footprints extracted from satellite imagery using deep learning models. This research supports the refinement of large-scale building energy modeling in the United States.

May 2025 – Present

Intern in Key Laboratory of Regional Sustainable Development

Jan 2021 - Dec 2022

At Institute of Geographic Science and Natural Resource Research,
Chinese Academy of Sciences

- My first project at IGNRR, funded by the Natural Science Foundation of China, revolved around the new grain production patterns in China. Utilizing GRACE gravity satellite data and MODIS NDVI products, we aimed to observe the spatial distributions of changes in agricultural development juxtaposed with water resources. This was pivotal in highlighting the contradictions arising due to their differing spatial distributions.
- Following this, I embarked on a new research endeavor. This time, our objective was to employ the MODIS Active Fire product to determine the spatial and time-series change of crop residue burning events in Northeast China spanning the period from 2015 to 2020. With the Chinese government initiating a straw returning policy in this region in 2017, our intent was to leverage satellite data to discern the variations pre and post the policy's inception. This would, in turn, enable a holistic assessment of the policy's temporal and spatial ramifications.

Study of a correction method based on linear regression algorithm for PM2.5 sensors

Jan. 2018

At the Institute of Automation, Chinese Academy of Science

- Inventing a method for correcting PM 2.5 sensors based on linear regression algorithm. Based on accurate data received from PM 2.5 monitoring station near the proximity of the PM 2.5 sensor, the method uses linear regression algorithm to correct the PM 2.5 output value of the sensor, making the output value of the sensor consistent with the accurate value of PM 2.5 from the monitoring station, and therefore achieving the purpose of making the PM 2.5 sensor more accurate and reliable. Published at Australia International Patent, Publication Number:2018100221

Mapping fine-scale human disturbances in a working landscape with Landsat time series on Google Earth Engine

At Ohio State University

- We explored the possibility of a Bayesian estimator of abrupt changes, seasonality and trends (BEAST) to capture small-scale disturbances of human activity in a catchment in Ohio as our study area. We found the algorithm can successfully capture the patterns and timings of small-scale disturbances that not captured in the annual land cover maps from Cropland Data Layers—one of the most widely used classification based land dynamics products in the US. The pre-processing of the data is done by me. Published at ISPRS Journal of Photogrammetry and Remote Sensing. DOI: <https://doi.org/10.1016/j.isprsjprs.2021.04.008>

PUBLICATIONS & PATENTS

- ✧ Rui Zhou, Frank Colin Moser, Yinan Feng, Mingzhou Jin, Bo Zou, ‘Hydrogen logistics network design for hydrogen fuel cell electric long-haul trucks’
International Journal of Hydrogen Energy, 215, 153889 (2026).
[DOI: 10.1016/j.ijhydene.2026.153889](https://doi.org/10.1016/j.ijhydene.2026.153889)
- ✧ Yinan Feng and Jieyong Wang, ‘Detecting the Spatial Mismatch of Water Resources and Grain Planting Pattern Changes in China Based on Satellite Data’
Frontiers at Environmental Science
[Online Publication DOI: 10.3389/fenvs.2022.904779](https://doi.org/10.3389/fenvs.2022.904779)
- ✧ Tongxi Hu, Elizabeth Myers Toman, Gang Chen, Gang Shao, Yuyu Zhou, Yang Li, Kaiguang Zhao, Yinan Feng, ‘Mapping fine-scale human disturbances in a working landscape with Landsat time series on Google Earth Engine’
ISPRS Journal of Photogrammetry and Remote Sensing
[DOI: 10.1016/j.isprsjprs.2021.04.008](https://doi.org/10.1016/j.isprsjprs.2021.04.008)
- ✧ A correction method based on linear regression algorithm for PM2.5 sensors. Published at Australia International Patent.
Publication Number: 2018100221

SKILLS & LANGUAGES

I mainly use R and Python, please check my:

[Github](#)

[Personal website](#)

Wearing a Mask and keeping social distance!

I used R Shiny to design an app that downloads data from the Johns Hopkins CSSE group (source), showing the last 7 days of new COVID-19 cases by state, as well as executive orders from the local government.

[link to the app](#)