Jialin Sun

Gender: Male
Date of Birth: 17 March 2000
Email: jialinsun4815162342@gmail.com
Telephone: +86 16651694296

Education

09/2022 – 07/2024 **China Agricultural University, Beijing, China**
- Master's Degree
- Major in Land Use and Information Technology
- GPA: 3.61/4 (Rank 2/14)

09/2018 – 06/2022 **Nanjing University of Information Science and Technology, Nanjing, Jiangsu Province, China**
- Bachelor's Degree
- Major in Remote Sensing Science and Technology
- GPA: 4.09/5.0 (Rank 4/23)

Work Experience

07/2024 – present **Research Assistant**
- Employer: Professor Xuecao Li
- Location: China Agricultural University, Beijing, China
- Duties: Research on urban sustainability and ecology; academic writing; project coordination.

Research Interests

- Urban sustainability and ecology
- Urban greenery and urban heat
- Environmental modeling
- Time-series analysis for environmental monitoring

Research Experiences

Quantification of three-dimensional green visual accessibility in Beijing

07/2024 – present

- Develop an efficient method to calculate the green view index (GVI) of different building floors, replacing Viewshed analysis.
- Evaluate the visual accessibility of urban greenspaces across different floors in Beijing.

★ **Duties:** Methodology design, implementation, analysis, writing and reviewing.

Automated crop mapping using geospatial data

05/2023 -06/2024

(1) Enhancing crop mapping with automated sampling techniques

- Evaluate the performance of segmentation models for agricultural parcel mapping.
- Develop a novel automated sample generation framework.

(2) A weakly supervised learning method for crop mapping (Master's thesis)

- Generate high-quality pseudo labels through weak annotations, replacing the labor-intensive process of obtaining pixel-level annotations.
- Apply pseudo labels to train a segmentation model for crop mapping.

★ **Duties:** Methodology design, implementation, analysis, writing and reviewing.

Large-scale crop mapping based on spatiotemporal data cubes

10/2022 – 05/2023

- Develop a datacube-based framework to conduct large-scale crop mapping.
- Analyze winter wheat distribution in Henan Province, China.

★ **Duties:** Implementation, analysis, writing and reviewing.

Teaching Experiences

Geospatial data application (China Agricultural University) **2023 Spring**

★ **Duties:** Teach geospatial data processing based on Python.

Publications

[1] **Sun J**, Yan S, Yao X, et al. A Segment Anything Model based weakly supervised learning method for crop mapping using Sentinel-2 time series images[J]. International Journal of Applied Earth Observation and Geoinformation, 2024, 133: 104085.

[2] **Sun J**, Yan S, Alexandridis T, et al. Enhancing Crop Mapping through Automated Sample Generation Based on Segment Anything Model with Medium-Resolution Satellite Imagery[J]. Remote Sensing, 2024, 16(9): 1505.

[3] Yan S, Yao X, **Sun J**, et al. TSANet: A deep learning framework for the delineation of agricultural fields utilizing satellite image time series[J]. Computers and Electronics in Agriculture, 2024, 220: 108902.

[4] **Sun J**, Yao X, Yan S, et al. Large-scale crop mapping based on multi-source remote sensing intelligent interpretation: A spatiotemporal data cubes approach[J]. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2024.

Skills

- Computer manipulation: Python, MATLAB, IDL, Linux, Google Earth Engine.
- Software: ArcMap, ArcGIS pro, ENVI, SNAP.

Language

- Mandarin (native)
- English (TOEFL: 107 | Reading: 28 | Listening: 29 | Speaking: 23 | Writing: 27)

Travel history

- The United States of America (2016, summer academy)
- France (2013, vacation)
- Australia (2011, vacation)
- Malaysia (2007, vacation)