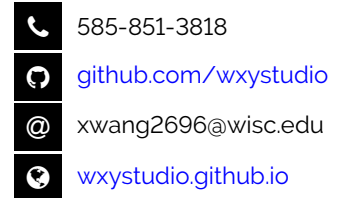


# Xiaoyu Wang



## RESEARCH INTEREST

Remote sensing, Yield prediction, Knowledge-guided machine learning

## EDUCATION

2023.1 –	<b>Ph.D</b> Biological Systems Engineering	University of Wisconsin-Madison
2017 – 2021	<b>Bachelor</b> Computer Science and Technology	Xi'an Jiaotong University

## EXPERIENCE

2021.4 – 2022.4	<b>Internship</b> Research on Audio front-end processing: Speech Separation and Enhancement	Microsoft Research Asia, supervised by Xiangyu Kong and Xiulian Peng
2020.9 – 2021.3	<b>Internship</b> Work on autonomous driving system, sensor calibration algorithm and train deep learning model	Sensetime, supervised by Tao Ma and Yikang Li
2020.6 – 2020.9	<b>Remote Summer Intern</b> Research on Adversarial Example and Federated Learning	Nanyang Technological University, supervised by Tao Bai and Jun Zhao
2019.1 – 2019.9	<b>Research Assistant</b> Research on distributed GAN	College of Artificial Intelligence, XJTU, supervised by Jinjun Wang
2019.6 – 2020.2	<b>Internship</b> do some projects about remote sensing, semantic segmentation and change detection	INNNO
2017.10 – 2018	<b>Research Assistant</b> Research on computer security and deep learning	Xi'an Jiaotong University, supervised by Jinsong Han

## PUBLICATION

### Jounal 2025

*Learning county from pixels: Corn yield prediction with attention-weighted multiple instance learning*  
**Xiaoyu Wang**, Yuchi Ma, Yijia Xu, Qunying Huang, Zhengwei Yang, Zhou Zhang  
Accepted by International Journal of Remote Sensing (IJRS) 2025

### Conference

#### 2025

*Knowledge-guided machine learning model with soil moisture for corn yield prediction under drought conditions*  
Zhengwei Yang, **Xiaoyu Wang**, Jingyi Huang, Zhou Zhang  
Accepted by IGARSS 2024-2025 IEEE International Geoscience and Remote Sensing Symposium

#### 2024

*County Level Crop Yield Prediction Using Smap Derived Data Products and Deep Learning Model*  
Zhengwei Yang, **Xiaoyu Wang**, Jingyi Huang, Zhou Zhang

Accepted by IGARSS 2023-2024 IEEE International Geoscience and Remote Sensing Symposium

2022

MULTI-MODAL MULTI-CORRELATION LEARNING FOR AUDIO-VISUAL SPEECH SEPARATION

**Xiaoyu Wang**, Xiangyu Kong, Xiulian Peng, Yan Lu

Accepted by Interspeech 2022

2021

A data-free approach for targeted universal adversarial perturbation

**Xiaoyu Wang**, Tao Bai, Jun Zhao

Accepted by SciSec 2021

**Preprint** 2025

Knowledge-guided machine learning model with soil moisture for corn yield prediction under drought conditions

**Xiaoyu Wang**, Yijia Xu, Jingyi Huang, Zhengwei Yang, Zhou Zhang

Submitted

## GRANTS

2025 BSE Travel Award of UW-Madison, 2025. (\$1000)

## AWARDS&HONORS

2017 third class award of Xi'an Jiaotong University. (GPA 20%)

## PROFESSIONAL SERVICES

**Journal reviewer** International Journal of Applied Earth Observation and Geoinformation (JAG)

## TEACHING EXPERIENCE

2024

BSE 405, ARTIFICIAL INTELLIGENCE IN AGRICULTURE

University of Wisconsin–Madison

Make homework and GEE lab code

## TALKS

2025

Knowledge-guided machine learning model with soil moisture for corn yield prediction under drought conditions

BSE 901, University of Wisconsin–Madison

2024

Learning county from pixels: Corn yield prediction with attention-weighted multiple instance learning

BSE 901, University of Wisconsin–Madison

## PRESENTATION

2025

Abstract

Knowledge-guided machine learning model with soil moisture for corn yield prediction under drought conditions

Accepted by AGU 2025

2025

Abstract

A knowledge-guided machine learning model with soil moisture for corn yield prediction under drought conditions

Accepted by ASABE 2025

2024

Abstract

*Developing a Novel Knowledge-Guided Deep Learning Algorithm for County Level Crop Yield Prediction in the Face of Climate Change in the US Midwest*

Accepted by AGU 2024

2024

Poster

*Learning county from pixels: Corn yield prediction with attention-weighted multiple instance learning poster in UW-Madison College of Agricultural and Life Sciences*

## **PROGRAMING LANGUAGE & SKILL**

*(Proficiency from top to bottom)*

**python:**

*anaconda*

**C++:**

*cmake; docker*

**LaTeX:**

*overleaf*

**Shell**

**CUDA C:**

*cudnn; cublas*

**matlab**

## **TOOL**

*(Proficiency from left to right)*

**Coding:**

*ubuntu; git*

**GIS:**

*QGIS; ArcGIS; gdal*

**Deep Learning:**

*pytorch; tensorflow; TensorRT*

**Computer Vision:**

*opencv*

**Slam:**

*pcl; ros*

**Audio:**

*librosa; asteroid; ffmpeg; Kaldi*