

# XIANGYU LU

✉ [luxyzju@zju.edu.cn](mailto:luxyzju@zju.edu.cn) •  [hobbitarmy.github.io](https://github.com/HobbitArmy)  
 [github.com/HobbitArmy](https://github.com/HobbitArmy) •  [researchgate.net/profile/xiangyu\\_lu6](https://researchgate.net/profile/xiangyu_lu6)

## OBJECTIVE

Locate and understand UAV images of field crop using photogrammetry and deep-learning methods, towards the automatic end-to-end UAV imagery processing and analyzing system.

## EDUCATION

**Zhejiang University** Sep. 2020 - Jul. 2025  
Ph.D., Agricultural Electrification and Automation Hangzhou, China  
Research Field: Agricultural information technology  
**China Agricultural University** Sep. 2018 - Jul. 2019  
Exchange Student | GPA: 3.53 Beijing, China  
**Oriel College, University of Oxford** Aug. 2018  
Summer Institute Program | Courses: Quantum Computing, Cosmology Oxford, U.K.  
**Northwest A&F University** Sep. 2016 - Jul. 2020  
B.S., Agricultural Mechanization and Automation | GPA: 3.71 (rank: 2/75) Yangling, China

## RESEARCH SKILLS

Skilled in: Python programming, Image processing, Deep learning model utilization and improvement.  
Familiar with: QGIS data processing; PyQt interface design; Arduino hardware development

## RESEARCH PROJECTS

**Automated Rice Phenology Mapping using UAV Images and Deep Learning** Jul. 2022 - Dec. 2022  
■ Utilize semantic segmentation for field extraction and phenology detection  
■ Propose direct geo-locating and incremental sparse sampling for traits mapping  
**Grape Leaf Disease and Pest Diagnose Using Transformer Networks** Jul. 2021 - Dec. 2021  
■ Provided the method of multi-model integration using prediction confidence  
■ Proposed a novel hybrid model with 98.51% accuracy on 11 categories  
**Soil Heavy Metal Detection based on Laser-Induced Breakdown Spectroscopy** Oct. 2019 - Jun. 2020  
■ Enhance spectrum signal with Ar gas, and quantitative regression using Neural Network  
■ Design and simulate an automatic LIBS batch inspection platform for soil samples  
**Wheat Field Weed Identification System using UAV** (Provincial Project/5k funds) Mar. 2018 - Apr. 2019  
■ Good Evaluation Result | As the team leader and algorithm implementation coder  
■ Constructed a real-time weed detection model for UAV imagery with 74.2% mAP

## AWARDS & HONORS

■ Award of Honor for Graduate 2020-2022 (top 15%, twice) Dec. 2022  
■ Special Award of Agricultural Equipment Innovation - ZOOLION Cup 2020 Jun. 2020  
■ President Scholarship 2017-2018 (top 5%) Dec. 2018

## PUBLICATIONS

- **Lu, X.**, Yang, R., Zhou, J., et al., 2022. A hybrid model of ghost-convolution enlightened transformer for effective diagnosis of grape leaf disease and pest. *Journal of King Saud University - Computer and Information Sciences*. <https://doi.org/10.1016/j.jksuci.2022.03.006>
- Zhou, J., **Lu, X.**, Yang, R., et al., 2022, Developing Novel Rice Yield Index Using UAV Remote Sensing Imagery Fusion Technology. *Drones*. 6, 151. <https://doi.org/10.3390/drones6060151>
- Yang, R., **Lu, X.**, Huang, J., et al., 2021. A multi-source data fusion decision-making method for disease and pest detection of grape foliage based on shufflenet v2. *Remote Sensing*. 13, 5102. <https://doi.org/10.3390/rs13245102>