Yihang She

PhD Student, Computer Science (AI for Environmental Risks)
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St Edmund's College
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Education

University of Cambridge — Cambridge, United Kingdom
MRes+PhD Student in Computer Science, affiliated with AI4ER CDT and 4C — *Oct. 2022 – Sep. 2026 (expected)*
Supervisors: Srinivasan Keshav, Andrew Blake and David Coomes

ETH Zurich — Zurich, Switzerland
MSc in Geomatics, advised by Konrad Schindler, GPA: 5.3/6.0 — *Sep. 2019 – June 2022*

Nanjing University — Nanjing, China
BSc in Geographic Information Science, GPA: 4.6/5.0 — *Sep. 2015 – July 2019*
Exchange student, University of California, Berkeley, GPA: 3.9/4.0 — *Jan. 2018 – May 2018*

Research Themes

3D Vision, Machine Learning, Synthetic Data, Earth Observations, Climate Change

Publications

SPREAD: A Large-Scale, High-Fidelity Synthetic Dataset for Multiple Forest Vision Tasks
Zhengpeng Feng, **Yihang She**, Srinivasan Keshav
Preprint. Under review.

MAGIC: Modular Auto-encoder for Generalisable Model Inversion with Bias Corrections
Yihang She, Clement Atzberger, Andrew Blake, Adriano Gualandi, Srinivasan Keshav
Preprint.

From Spectra to Biophysical Insights: End-to-End Learning with a Biased Radiative Transfer Model
Yihang She, Clement Atzberger, Andrew Blake, Srinivasan Keshav
Preprint. Under review. Condensed version presented at ICLR 2024 Climate Change AI Workshop.

Fast Hierarchical Learning for Few-Shot Object Detection
Yihang She, Goutam Bhat, Martin Danelljan, Fisher Yu
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2022

Digital Taxonomist: Identifying Plant Species in Citizen Scientists' Photographs
Riccardo de Lutio, **Yihang She**, Stefano D'Aronco, Stefania Russo, Phillipp Brun, Jan Dirk Wegner, Konrad Schindler
ISPRS Journal of Photogrammetry and Remote Sensing, 2021

Strong Regulation of Daily Variations in Nighttime Surface Urban Heat Islands by Meteorological Variables across Global Cities
Yihang She $*$, Zihan Liu $*$, Wenfeng Zhan, Jiameng Lai, Fan Huang ($*$ equal contributions)
Environmental Research Letters, 2021

Selected Training Projects

EnterpriseTECH Cohort 16, Judge Buisness School — Nov. 2024 – Jan. 2025
Lectures and supervisions that transform researchers into innovators and entrepreneurs — *Cambridge, United Kingdom*

Assessing the Impact of Drought on Tropical Forests using GEDI — Jan. 2023 – Mar. 2023
AI4ER Guided Team Challenge advised by Dr. Charlotte Wheeler and Amelia Holcomb — *Cambridge, United Kingdom*

Deep Learning for Road Segmentation — Feb. 2020 – July 2020
Course Project under Prof. Thomas Hofmann, Computational Intelligence Lab — *ETH Zurich, Switzerland*

Language Teacher from Augmented Reality — Feb. 2020 – June 2020
Course Project under Prof. Marc Pollefeys, 3D Vision Lab — *ETH Zurich, Switzerland*

Working Experiences

Intern at Elevate3D July 2022 – Sep. 2022
Adapted advanced segmentation models for NeRF-based 3D reconstruction *Zurich, Switzerland*

Research Assistant at ETH Zurich Apr. 2022 – Aug. 2022
Extended the crop mapping model ms-convSTAR to whole Switzerland *Zurich, Switzerland*

Mitacs Canada Research Intern June 2018 – Sep. 2018
Conducted literature review to identify the research gaps of Community Forestry *Winnipeg, Canada*

Conference, Workshop, and Summer School

International Computer Vision Summer School 2024 Sicily, 7-13 July, 2024
Offered to selected PhD students: 30 hours of lectures from world-renowned experts

ICLR 2024 Climate Change AI Workshop Vienna, 11 May, 2024
Poster presentation of my MRes project on inverting the radiative transfer model

ELLIS Computer Vision Workshop Modena, 9-12 April, 2024
Poster presentation and talks by ELLIS Fellows in Computer Vision from European labs

International Conference on Intelligent Robots and Systems Kyoto, 23-27 October, 2022
Oral presentation on fast few-shot object detection based on my master's thesis.

Teaching and Demonstration

Supervision for Part IB Further Graphics Cambridge, Michealmas 2024

Demonstration at Computer Lab Undergraduate Open Days Cambridge, Summer 2024

Supervision for Part IB Artificial Intelligence Cambridge, Easter 2024

Demonstration at Cambridge Festival Cambridge, Lent 2024

Volunteer for Q&A at Cambridge Zero Community Day Cambridge, Lent 2024

Selected Honours and Awards

St Edmund's College Instrumental Award University of Cambridge, 2024

Choral Exhibition Award University of Cambridge, 2023

Cambridge Centre for Carbon Credits PhD Fellowship University of Cambridge, 2022-26

ESRI Student of the Year Prize ESRI, Inc., 2021

Excellence Scholarship and Opportunity Program ETH Zurich, 2019-2022

Outstanding Graduate Nanjing University, 2019

National Scholarship Ministry of Education of China, 2016

Technical Skills

Hands-on Experience: self-supervised learning, meta-learning, object detection, and 3D reconstruction

Developer Tools: VS Code, Git, MatLab, Visual Studio, Google Earth Engine, Unity Engine, Unreal Engine

Languages: Chinese (native), English (TOEFL iBT: 111/120), Basic Korean and German

Hobbies

Choral Singing (Tenor, Chapel Schola), Chinese Calligraphy, Skiing, and Reading