

# Sherrie Wang

---

## CONTACT INFORMATION

Center on Food Security and the Environment  
473 Via Ortega Suite 349  
Stanford University  
Stanford, CA 94305 USA

*Phone:* (781) 267-2148  
*E-mail:* sherwang@stanford.edu  
*Web:* <http://stanford.edu/~sherwang>

## EDUCATION

**Stanford University**, Stanford, California USA

Ph.D. Candidate, Computational and Mathematical Engineering, 2015 – expected June 2021  
Dissertation: “Crop Type Mapping in Label-Scarce Settings”

Advisor: David Lobell

M.S., Computational and Mathematical Engineering

**Harvard University**, Cambridge, Massachusetts USA

B.A., Biomedical Engineering, 2014

*Magna cum laude* with high honors

## PEER-REVIEWED PUBLICATIONS

(\* denotes equal  
contribution)

1. **Sherrie Wang**, Stefania Di Tommaso, Joey Faulkner, Thomas Friedel, Alexander Kennepohl, Rob Strey, and David B. Lobell. Mapping crop types in southeast India with smartphone crowdsourcing and deep learning. *Remote Sensing*, 12(18), 2020
2. **Sherrie Wang**, Stefania Di Tommaso, Jillian M. Deines, and David B. Lobell. Mapping twenty years of corn and soybean across the US Midwest using the Landsat archive. *Scientific Data*, 7(1):307, 2020
3. Marc Rußwurm\*, **Sherrie Wang\***, Marco Körner, and David B. Lobell. Meta-learning for few-shot land cover classification. *2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, pages 788–796, 2020  
EarthVision 2020 Best Paper Award
4. **Sherrie Wang**, William Chen, Sang Michael Xie, George Azzari, and David B. Lobell. Weakly supervised deep learning for segmentation of remote sensing imagery. *Remote Sensing*, 12(2), 2020
5. Jillian M. Deines, **Sherrie Wang**, and David B. Lobell. Satellites reveal a small positive yield effect from conservation tillage across the US Corn Belt. *Environmental Research Letters*, 14(12):124038, 2019
6. Neal Jean, **Sherrie Wang**, Anshul Samar, George Azzari, David Lobell, and Stefano Ermon. Tile2Vec: Unsupervised representation learning for spatially distributed data. *Proceedings of the AAAI Conference on Artificial Intelligence*, 33:3967–3974, 2019
7. **Sherrie Wang**, George Azzari, and David B. Lobell. Crop type mapping without field-level labels: Random forest transfer and unsupervised clustering techniques. *Remote Sensing of Environment*, 222:303–317, 2019
8. Lo-Hua Yuan, Anthony Liu, Alec Yeh, Aaron Kaufman, Andrew Reece, Peter Bull, Alex Franks, **Sherrie Wang**, Dmitri Illushin, and Luke Bornn. A mixture-of-modelers approach to forecasting NCAA tournament outcomes. *Journal of Quantitative Analysis in Sports*, 11, 2015

---

Last updated September 18, 2020

CONFERENCE  
PRESENTATIONS

1. Sherrie Wang\*, Marc Rußwurm\*, Marco Körner, and David B. Lobell. “Meta-learning for few-shot time series classification.” *IGARSS*, 2020 (Presentation)
2. Marc Rußwurm\*, Sherrie Wang\*, Marco Körner, and David B. Lobell. “Meta-learning for few-shot land cover classification.” *CVPR EarthVision Workshop*, 2020 (Presentation)
3. Sherrie Wang, Stefania Di Tommaso, Joey Faulkner, Thomas Friedel, Alexander Kennepohl, Rob Strey, and David B. Lobell. “Mapping crop types in India with crowdsourced data and deep learning.” *American Geophysical Union Fall Meeting*, 2019 (Presentation)
4. Jillian M. Deines, Sherrie Wang, and David B. Lobell. “Investigating the yield impacts of conservation tillage in the US Corn Belt using Landsat.” *American Geophysical Union Fall Meeting*, 2019 (Presentation)
5. Neal Jean, Sherrie Wang, Anshul Samar, George Azzari, David Lobell, and Stefano Ermon. “Tile2Vec: Unsupervised representation learning for spatially distributed data.” *AAAI*, 2019 (Presentation)
6. Sherrie Wang, William Chen, George Azzari, and David B. Lobell. “Weakly supervised deep learning for segmentation of cropland in remote sensing imagery.” *American Geophysical Union Fall Meeting*, 2018 (Presentation)
7. Zhenong Jin, George Azzari, Sherrie Wang, and David B. Lobell. “Mapping the yields of major crops in Sub-Saharan African smallholder farming system.” *American Geophysical Union Fall Meeting*, 2018 (Poster)
8. Neal Jean, Sherrie Wang, Anshul Samar, George Azzari, David Lobell, and Stefano Ermon. “Tile2Vec: Unsupervised representation learning for spatially distributed data.” *Women in Machine Learning Workshop*, 2018 (Poster)
9. Sherrie Wang, Sebastian Le Bras, George Azzari, and David B. Lobell. “Toward global crop type mapping using a hybrid machine learning approach and multi-sensor imagery.” *American Geophysical Union Fall Meeting*, 2017 (Poster)
10. Evan Wu, Adam Marblestone, Sherrie Wang, Nick Perkons, Thomas Schaus, Sun Wei, and Peng Yin. “Controllable release of gold nanoparticles from a switchable DNA box.” *10th Annual Conference, Foundations of Nanoscience*, 2013 (Poster)

INVITED TALKS

- IEEE GRSS Panel on Deep Learning and Remote Sensing. September 2020
- Workshop on Knowledge-Guided Machine Learning, University of Minnesota. “Meta-learning for remote sensing.” August 2020
- Ayiti Analytics Webinar. “Data science for sustainability.” July 2020
- Expert Workshop on Advancing Application of Machine Learning Tools for NASA Earth Observation Data, Washington, DC. “Satellites, satellites all around, but not enough ground truth labels: Lessons from crop type mapping.” January 2020
- Bay Area Scientific Computing Day, Lawrence Berkeley National Lab. “Mapping crop types in southeast India with crowdsourced data and deep learning.” December 2019
- Women in Data Science Podcast. “Applying machine learning to solve global food security challenges.” September 2019
- Computational Sustainability Network Webinar. “Weakly supervised learning for satellite imagery: Applications in crop mapping.” March 2019

HONORS AND  
AWARDS

Top 5% of papers, International Geoscience and Remote Sensing Symposium (IGARSS), 2020  
Best Paper Award, CVPR EarthVision Workshop, 2020  
Finalist, NCWIT Aspirations in Computing Award, 2020  
Department Short Course Instructor Award, 2019  
Stanford Graduate Fellowship, 2015 – 2018  
Phi Beta Kappa, 2013  
John Harvard Scholar, 2010 – 2012  
Third Place, International BIOMOD Competition, 2011  
HHMI Interdisciplinary Undergraduate Research Fellowship, 2011  
Detur Book Prize, 2011

TEACHING  
EXPERIENCE

**Stanford University**, Stanford, California USA

*Instructor, Introduction to Deep Learning (ICME Workshop)* **August 2020**  
Taught day-long workshop on deep learning to 250 participants from academia and industry.

*Instructor, CME 250: Introduction to Machine Learning* **Winter 2019**  
Taught 4-week short course on machine learning; designed and graded problem sets.

**Harvard University**, Cambridge, Massachusetts USA

*Teaching Assistant, ES 53: Quantitative Physiology* **Fall 2012**  
Held office hours for class of 44 students; graded problem sets and exams.

PROFESSIONAL  
SERVICE

Vlogger, Women in Data Science High School Outreach, 2020

Mentor, Stanford Women in Math Mentoring, 2016 – 2019

Member, ICME Student Council, 2016 – 2019

Organizer and content creator, Women in Data Science Conference Datathon, 2019

Organizer, Women in Data Science Conference Datathon, 2018

Mentor and judge, Stanford Big Earth Hackathon, April 2018

**Reviewer:** Remote Sensing, IEEE Transactions on Geoscience and Remote Sensing, International Journal of Applied Earth Observation and Geoinformation, ICML CV4GC Workshop, NeurIPS Spatiotemporal Decision-making Workshop

**Member:** American Geophysical Union, IEEE

OTHER WORK  
EXPERIENCE

**Atlas AI**, Palo Alto, California USA

*Visiting researcher* **Summer 2018**  
Developed machine learning models to analyze and predict agricultural and economic indicators at fine resolution across the developing world.

**Cardinal Ventures**, Stanford, California USA

*VP of Mentorship* **2015 – 2018**  
Connected founders to mentors at Stanford's startup accelerator. From 2015 to 2018, graduated 64 companies that raised over \$17 million.

**Premise Data**, San Francisco, California USA

*Data Science Intern* **Summer 2016**

Used deep learning to analyze millions of observations captured daily by a global network of contributors to unearth connections that impact investment and policy decisions.

**Goldman Sachs**, New York, New York USA

*Investment Banking Analyst*

**2014 – 2015**

Helped corporate clients hedge interest rate and foreign currency risk through the structuring of derivative products in the Corporate Risk Management group.

- COMPUTER SKILLS
- Languages: Python; some use of R, C++, Javascript, MATLAB, Unix shell scripts
  - Deep Learning Frameworks: PyTorch, TensorFlow, Keras
  - Other Frequently-used Software: Jupyter, Google Earth Engine, Google Cloud Platform, Adobe Illustrator, Adobe Photoshop, L<sup>A</sup>T<sub>E</sub>X