

Yuanhong Song

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EDUCATION

- M.S. **Statistics**, Washington State University, 2019
Developing Interpretable Spatio-temporal Vegetation Variation Framework
- M.S. **Soil Science**, Washington State University, 2017
Estimation and Mapping of Soil Carbon Concentration with In-situ Vis-NIR at the Field Scale
- B.S. **Natural Resources and Environmental Sciences**, China Agricultural University, 2011

EMPLOYMENT/ANALYTICAL EXPERIENCE

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| Data Analyst as in Research Assistant | Washington State University | 2017 – Present |
| <ul style="list-style-type: none">▪ Initialized research project by establish pipeline for satellite image data acquisition, cleaning and preprocessing using command line interface rest API and cloud-based platform (Google Earth Engine);▪ Analyzed and explained spatial-temporal variability in crop performance using satellite images by mixed-effect regression models (GLMM), time series analysis, and Clustering Large Application (CLARA);▪ Result contributed to the reward of a 500,000 USDA grant funding. | | |
| Data Analyst as in Research Assistant | Washington State University | 2014 – 2017 |
| <ul style="list-style-type: none">▪ Predicted soil carbon concentration from soil proximal sensed hyper-spectrum using partial least squares (PLS) and created high-resolution 3D soil carbon concentration maps using generalized linear mixed model (GLMM) and random forest (RF) methods;▪ Research product has led to an extended cross-team collaboration for soil hydrological studies and agro-economic modeling;▪ Designed a process-based soil sampling protocol. | | |
| Research Assistant | China Agricultural University | 2011 – 2013 |
| <ul style="list-style-type: none">▪ Managed and coordinated the financial account of the Sewage Bio-Purifying System project sponsored by the State High-Tech Development Plan of China;▪ Operated and maintained the sewage bio-purifying system for biochemistry research. | | |
| R&D Intern | Beijing Puren Ecological Technology Co., Ltd. | 2008 – 2009 |
| <ul style="list-style-type: none">▪ Analyzing fruits quality decaying curve to assist team designed a novel preserver-package system for extending packed fresh food shelf life;▪ Designed sampling method and conducted chemical experiments for testing fruit quality | | |

TEACHING EXPERIENCE

Teaching Assistant	Washington State University	2015 – 2017
<ul style="list-style-type: none"> ▪ Statistical Genomics ▪ Introduction to Geographic Information System (GIS) ▪ GIS Spatial Analysis ▪ Remote Sensing and Airphoto Interpretation 		<p>2018 Spring</p> <p>2017 Fall, 2016 Fall, 2015 Fall</p> <p>2016 Spring, 2017 Spring</p> <p>2016 Spring, 2017 Spring</p>

ANALYTICAL SKILLS

MCMC	Mixed effect models	Classification
Time series	Statistical simulation	Decision tree
Statistical modeling	Generalized linear models	Machine Learning

SPECIALTIES

Geospatial modeling	ArcGIS, QGIS	Image processing & analysis
Remote Sensing	GRASS GIS, SAGA GIS	Multispectral
GIS	Google Earth Engine	Hyperspectral

PROGRAMMING & COMPUTING

R	SQL, JSON	Command line coding
Python	JavaScript	Data acquisition
SAS	Tableau	Data wrangling

AWARDS & ACTIVITIES

Student Consultant Intern	WSU Center for Interdisciplinary Statistical Education & Research	2019
Symposium Organizer	WSU Plant Science Symposium	2018 & 2019
Active member	WSU R Working Group & Python Working Group	since 2018
Lindahl Memorial Scholarship	Washington State University	2015
Volunteer	Heifer International, Beijing, China	2010 - 2013