

Harrison Smith

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EDUCATION

University of Michigan School for Environment and Sustainability (SEAS) (Ann Arbor, MI)

- **Master of Science**, Environmental Informatics and Conservation Ecology, April 2019
- **Select Courses:** Principles of GIS, Python for Environmental Informatics, Remote Sensing of Environment, Field Remote Sensing, Computer Modeling of Complex Systems, Model-based Statistical Inference for Ecology, GIS for Natural Resource Applications, Applied Ecosystem Modeling

University of Arkansas Fulbright School of Arts and Sciences (Fayetteville, AR)

- **Bachelor of Science**, Biological Science, Minor in Spanish, May 2016
- **Academic Honors:** *Cum Laude*

PROFESSIONAL EXPERIENCE

University of Michigan, Research Associate in Sustainable Agriculture and Remote Sensing

September 2019 – present

- Led research projects investigating sustainable agriculture and adaptive capacity in India and Puerto Rico
- Acquired, processed, and analyzed remote sensing data from multiple sensors
- Wrote and edited manuscripts for submission for publication in peer reviewed journals

Michigan Tech Research Institute, Remote Sensing Intern

May 2019 – August 2019

- Automated processing pipelines for Synthetic Aperture Radar (SAR) imagery
- Enhanced algorithms for SAR classification of surface water extent, landcover types, and flooded vegetation extent in the Great Lakes Basin
- Collaborated in ecological field work missions measuring water levels, soil moisture, and biomass in the Great Lakes Basin and Northwest Territories of Canada

University of Michigan, Graduate Student Instructor

September 2018 – April 2018

- Taught graduate level lab sections in field ecology methods and natural resource statistics using R
- Developed lesson plans in collaboration with other student instructors and lead professors
- Graded assignments and managed grading database for multiple classes of 20+ students

University of Michigan Environmental Spatial Analysis Lab, Research Assistant

September – January 2018

- Interpreted land cover classes using natural and false color composite high resolution imagery
- Merged, edited, and performed topology checks of vector layers using ArcGIS software
- Managed spatial data in multiple geodatabases in coordination with other lab members

The Farm at St. Joe's, GIS and Mapping Intern

May 2017 – September 2017

- Created, maintained, and updated geodatabases for mapping of a trail system and relevant landmarks
- Collected geospatial data in the field using mobile GIS applications and online from public datasets
- Collaborated with an interdisciplinary team of professionals to develop print and web-based trail maps

RESEARCH EXPERIENCE

Master's Thesis, University of Michigan (Ann Arbor, MI)

- Automated mapping of cropped area in Indian smallholder farms: A comparison of MODIS, Landsat 8, Sentinel-2, and Planet imagery (In progress)

Honors Research Thesis, University of Arkansas (Fayetteville, AR)

- Relationships between nutrients, periphyton abundance, and benthic macroinvertebrate scrapers in Ozark Highland streams (2016)

Independent Study Project, School for International Training Ecuador, (Quito, Ecuador)

- Human impacts on water systems: Biological assessment of water quality in the Bosque Protector Río Guajalito using aquatic macroinvertebrates (2015)

Directed Research Project, School for Field Studies, (Pilcopata, Peru)

- Abundance and distribution of tree fern species and their relationship to biophysical factors (2014)

SKILLS, ACTIVITIES AND INTERESTS

- **Skills:** ArcGIS, ERDAS IMAGINE, Google Earth Engine, R project software, Python, Netlogo, statistical modeling, Microsoft Office, plant identification
- **Leadership activities:** SEAS Student Government Careers Chair, SEAS Environmental Informatics track leader, SEAS Faculty Search Committee student representative
- **Interests:** Organic gardening, cooking, and playing music on guitar, banjo, and saxophone