Travis M. Williams

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Recent graduate with a focus on climate risk management and geospatial data analysis. Detailed-oriented and focused problem solver with an enthusiasm for graphics, presentation, and the development of interactive user interfaces. Experienced in a variety of GIS- and programming-oriented tasks, most adept in spatial/tabular data manipulation in R and raster manipulation in Python.

Education

Master of the Arts in Geography - University of Colorado Boulder — Jun 2018
Thesis: "Drought index-based insurance for the US cattle ranching industry."
Focus: Climate risk management, drought, weather-based index insurance, geospatial information
Cumulative GPA: 3.88

Bachelor of Science in Geography - Florida State University — Dec 2009
Focus: GIS, Ecology, Habitat Conservation, French
Cumulative GPA: 3.39
Minor: French, Biology
Honors: Florida Bright Futures Scholarship

Technical Skills

GIS Interfaces: 5 years of experience with ArcGIS, familiar with QGIS, Grass, & DIVA GIS
Coding Languages: R, Python, GDAL, STATA, and HTML (in order of competence)
Applications: Array-based raster and data frame manipulation, interactive application development, econometrics, data transfer and storage, and some remotely sensed imagery analysis capability.

Research and Technical Experience

Graduate Research Assistant - CIRES, University of Colorado Boulder — Jan 2017 - Present

- Co-author literature review publication on adaptive ranching practices and drought information.
- Apply econometric methods to discover climate signals in a large market data set.
- Redesign an existing rainfall index-based insurance system to accommodate drought indices and researched the efficacy of such a design for drought hazard mitigation.
- Develop and deploy interactive online risk management and decision-making tools.
- Generate descriptive charts, maps, and other graphical representations of research results.

Research Assistant - Agriculture Dept., Southern Illinois University Carbondale

- Collected plant tissue and soil samples with Truck Mounted Soil Probe, SPAD and other devices. — Apr – Nov 2014
- Performed KCL extractions and other laboratory tests for agricultural chemicals content.
- Collected and interpreted climate data and site information for a large meta-analysis of high-yield fertilizer studies across the Midwest using various GIS programs.
- Used ArcGIS and SAS to perform spatial analysis into the performance of a no-till and cover crop study concurrent with extensive research into the practices. — Oct 2015 – May 2016

Teaching Experience

Graduate Teaching Assistant - University of Colorado Boulder — Fall 2016, 2017

Geography of the Environment and Society – *3 recitations per term | 25-30 students per recitation*

- Human-Earth system interactions, theories of resource management, and natural hazard mitigation.
- Combination of content review, group activity, and grading.
- Focused on connecting course content with current events and engaging students in discussion.

World Regional Geography – *1 recitation | 21 students* — Summer 2017

- Features of 5 major world regions with a particular focus on culture and social injustice.

Publication

Shrum, T., W.R. Travis, **T. Williams**, E. Lih. "Managing climate risks on the ranch with limited drought information". *Climate Risk Management*, vol. 20, pp. 11-26, 2018.