

PhD Research Assistantship- Using Data Science to Understand Farmer and Rural Community Climate Adaptation

The University of Vermont is seeking qualified applicants for a fully funded four-year doctoral project examining farmer perceptions and behaviors related to climate change adaptation. The project includes the aggregation and development of a largescale dataset of farmer behavior and perceptions across US states, novel models of climate adaptation, and their application for farmer and rural community responses to climate change.

Background

The research project with collaborators at University of Vermont (Dr. Meredith Niles, Dr. Nicholas Gotelli, Dr. Laurent Hébert-Dufresne) and University of Maine (Dr. Tim Waring, Dr. Brian McGill, Dr. Katie Corlew, Dr. Matthew Dube) seeks to understand how both rural human communities and species populations will respond to challenges posed by climate change [1]. The project will synthesize large amounts of data and develop new modeling techniques to predict climate-driven shifts in species ranges as well as the responses and cultural adaptations of human communities. The project will also work with farmers and rural communities to understand their perspectives of the projected outcomes and responses. A successful applicant will work with a multidisciplinary team of biologists, social scientists and complexity researchers in Maine and Vermont.

Aims

The main aim of this position is to work within the social science team to assist in data aggregation of farmer behavior and perceptions related to climate change adaptation, work with farming and rural communities to present results and understand perspectives, and develop models of human behavioral shifts under the influence of climate change. Tasks include data identification, aggregation and synthesis, modelling and data analysis, engagement with agricultural and rural communities, and presenting results to diverse stakeholders and policy makers to facilitate understanding and anticipation for climate change adaptation.

Position

The position is one of five new hires that form the core of the four-year research project funded by the National Science Foundation. The graduate student will work with Dr. Meredith Niles (www.meredithniles.com). The position is intended to prepare a PhD with expertise in social-ecological systems, food systems, and quantitative social science, with a focus on climate change adaptation and policy. Support includes a fellowship of \$30,500/yr for four years, and a tuition waiver. Note that the successful candidate will still need to be accepted into a UVM PhD program, either Food Systems (Applications due January 15th) or Complex Systems and Data Science (Applications due February 15th). These applications require additional application materials.

Requirements

Essential

- Demonstrated research and academic excellence
- Strong social science quantitative skills
- Experience working with farmers or rural communities
- Significant experience with a research computing language such as R, Python, Stata, etc.
- Excellent communication skills and ability to work with a team
- Demonstrated ability to learn new skills
- Mature, organized, professional and courteous

Desired

- Completed master's degree in a relevant science
- Experience in human behavior, especially in social-ecological systems
- Strong interest and experience in data visualizations
- Enthusiasm for open data and science practices

Application:

Please address questions and completed applications electronically to Dr. Meredith Niles (mtniles@uvm.edu). Applications should include:

1. A cover letter detailing your interest in the position, how you meet the essential and desired requirements, and details of past research projects
2. A CV or resume, including three references (with name, phone, email).

Review of materials will begin November 15 to facilitate enough time for the potential student to apply to a relevant program.