GIS Analyst/Research Assistant

Summary:
This position will provide support for remote sensing and GIS of winter cover crops for the United States Department of Agricultural (USDA), Agricultural Research Service (ARS) in collaboration with the Dr. Steven Mirsky in the Sustainable Agricultural Systems Laboratory and Dr. Dean Hively in Hydrology and Remote Sensing Laboratory. The primary purpose of this position is to assist in agronomic research by processing, cleaning, and summarizing tractor-mounted, remotely sensed estimates of cover crop performance using GIS. Crop performance measures include biomass, height, leaf angle distribution, ground cover, and nitrogen content; remotely sensed measures include RGB photography, radar, lidar, and multispectral reflectance. This is a temporary position, that is eligible for remote work (within the United States), with a maximum duration of 12 months (~10-20 hours/week). Pay is commensurate on experience. If interested, contact Dr. Jyoti Jennewein jyoti.jennewein2@usda.gov with a resume and reference list.

Duties and Responsibilities:
- Data processing and organization
  - Ingest, edit, summarize, and export spatial data
  - Geocoding and editing spatial data
  - Convert processed spatial data to tabular format for other analysts and vice versa
  - Create and refine workflows for future datasets to include native geocoding
  - Integrate various disparate data formats
- Team collaboration
  - Work with physical and data scientists, Agronomists, and machine learning experts to bring spatial context to their analyses
  - Deliver processed data in common formats to our team
- Technology assessment
  - Test and evaluate spatial tools and software platforms to decide if they are useful for our organization
  - Train analytical and technical staff on adopted technologies

Required Job Qualifications:
- Bachelor's degree in Geography, GIS, Environmental Science, Agriculture, Computer Science, or a related field
- Coursework or experience in GIS, remote sensing, and computer programming
- Proficiency using ArcGIS and/or QGIS
- Familiarity with Python, R, and/or JavaScript in running and editing existing code
- Comfortable processing and editing spatial data
- This position is likely to be performed mostly remotely until USDA COVID safety protocols are updated. A face mask is currently required for in-office work.

Preferred Job Qualifications:
- Interest or current pursuit of graduate degree in related field
- Interest in or experience conducting scientific research
- Proficiency with Python, R, and/or JavaScript