

2019 Data Science Innovation Lab: Data Science Challenges in Rural Health and Environmental Exposures



Some biomedical expertise areas with questions applicable to rural health and environmental exposures include but is not limited to the following (The lab is open to any biomedical investigator who has research questions with an associated rural health big data challenge):

Behavioral:

Investigators who have research questions relating to human or animal behavior and psychology that are potentially caused by or impacted by environmental differences arising from rural health changes with an associated challenge involving big data in need of a new quantitative approaches.

Bioinformatics:

Investigators who have research questions relating to complex data mining and analysis relating biological data that involve rural health and the environment. Data including but limited to genomic, metabolomics, electronic health records, mobile health data, wearables/sensors, and spatial location data.

Biology:

Investigators who have research questions looking at the underlying biological mechanisms important to our fundamental understanding of rural health and biology with an associated challenge involving rural health big data in need of new quantitative solutions.

Cancer Research:

Investigators who are involved in cancer-related research that address components and impact of disease progression related to rural health issues, access and environmental influences.

Environmental Health:

Investigators who have broad ranging questions on ecology, biodiversity, and the environment that have implications on diseases and health that impact rural communities.

Epidemiology:

Investigators who have research questions involving the health disparities between rural and urban communities and how the environment could impact health services, access, and disease outcomes.

Population Science:

Investigators who have experience and/or training in public health, medicine, pharmacy, economics, demography, and urban planning with research questions that intersect rural health and environmental exposures. Also, encouraged are investigators interested in how policies shape these outcomes and efforts address needed changes to harness big data initiatives to improve health outcomes for rural communities. Investigators with experience working with groups underserved and/or marginalized are highly encouraged to apply.

Toxicology:

Investigators with experience in biology and chemistry who have research questions that align with rural health safety and environmental exposure awareness. Toxicologists who are also interested in policy development involving big data (access, sharing, and discovery) to improve the health in rural communities are also encouraged to apply.