About Us

The Mind & Brain Health Labs (MBHL; https://www.unmc.edu/mbhl/) is an interdisciplinary group of researchers who are committed to clinical translational research on real-world behavior and safety in healthy and patient populations. Our collaborative team combines expertise from medicine, cognitive science, neuroscience, human factors, driving research, statistics, computer science, biomechanics, and public policy. We focus on understanding how humans behave when interacting with technology in-the-lab and in-the-field, with a focus on mobility and cognition. To address these questions, we study human behavior in the context of human-machine interactions and in complex environments using novel technologies for functional, physiologic, and performance-based monitoring. We use the results of our research to inform patient and clinician education, policy, and technology development with the goal of improving health, mobility, and quality of life in individuals of all ages.

What We're Looking For

MBHL is seeking a Post-Doctoral Research Associate with strong data analytic and research skills. Preference is given to candidates with a background in human behavior. The Post-Doctoral Research Associate will play a primary role in the analysis of large, naturalistic datasets on real-world driving behavior, performance, and safety in individuals with and without disease. Data analyses will incorporate multidimensional data, including driving, medical, physiologic, computer vision, and GIS. The Post-Doctoral Research Associate will play a key role in the intellectual development of research questions and analyses, including contributing to the development of new research questions and funding proposals. This is a great opportunity to get experience with novel datasets and translational research on modeling human performance and safety, in addition to building a CV with presentations, publications, and funded grants. Interested? E-mail Jennifer Merickel at jennifer.merickel@unmc.edu.

You Will
- o Identify, intellectually develop, and implement research questions on human behavior, physiology, and neurocognitive performance in the context of complex environments, human-machine interactions, and disease.
- o Use statistical analyses and other data science approaches to manipulate, analyze, and provide answers to research questions using large amounts of structured and unstructured data.
- o Apply your research results (positive and null) to develop future clinical translational research programs and intervention techniques.
- o Work closely with MBHL research staff and collaborators to develop innovative new research ideas and data analyses.
- o Share research findings with the broader academic community through peer-reviewed conference presentations and publications.
- o Follow IRB Protocol, HIPAA, and Standard Operating Procedures in Human Subjects Research.

You Have
- o A PhD in a relevant field. Relevant fields include (but are not limited to) Computer Science, Behavioral Sciences (Psychology, Cognitive Science, Neuroscience, and Human Factors), Statistics, and Engineering.
- o A strong background in statistical modeling and advanced data analysis skills.
- o Expert experience with statistical and/or general programming languages (preference for Python and R).
- o History of academic publications and conference presentations.
- o Excellent verbal and written communication skills (English).
- o Special preferences for:
  - o Specialization in data science and quantitative/computational modeling techniques, including predictive, time series, machine learning, deep learning, and other modeling approaches.
  - o Prior experience conducting, designing, and analyzing data from human behavioral experimentation (Cognitive, Physical, Neuroscience, Medical, Human Factors), transportation research, and/or human physiology/biomechanics.
  - o Experience with computer vision, GIS, and database development.
  - o Experience cleaning and processing big data (structured/unstructured), including development of automated processing routines and data analysis pipelines.
  - o Familiarity with tools for computing over large datasets (Hadoop, Spark, others).