

Rachel Ulrich: Mathematical Sciences

Mentor: Greenwood Mark -- Mathematical Sciences

Reconstructing suicide vs. elevation datasets and related analyses

Dr. Mark Greenwood has authored a locally published textbook for STAT 217 – an intermediate statistics course offered at MSU – and is interested in incorporating an exploration of data on county suicide rates and a possible connection to elevation. Both elevation and suicide rate information are publicly available, but researchers using these data sets have not published a holistic dataset incorporating the multiple sources from which this information stems. I plan to recreate a dataset focusing on the potential relationship between altitude and suicide rates in the contiguous United States based upon two well-publicized articles. In addition to providing a thought-provoking textbook example, this dataset and exact methods for reconstruction will be submitted to MSU's Scholarworks and made available as a public geospatial dataset on ArcGIS Online, allowing other researchers interested in these data access to an easily analyzed version. A comparison of results will serve as a verification of methods, possibly allowing me to improve upon these methods in future research.