Final Project Proposal

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We will use cluster analysis to classify different types of water risk using physical attributes from the WRI Aqueduct dataset, [1] population data from the European Commission's Global Human Settlements Layer,[2] Poverty Indicators from NASA's Socioeconomic Data and Applications Center,[3] and NOAA's DMSP OLS Night Time Lights Timeseries.[4]

Our analysis will combine datasets using spatial joining and aggregation, standardizing variables, and cluster analysis. We are unsure whether we will use k-means or BDSCAN.

We will satisfy the project requirements by using data from 3 or more sources, use complex analysis, including geospatial joins and aggregating rasters to polygons. We will also use clustering analysis.

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[1] https://www.wri.org/aqueduct/data
[2] https://ghsl.jrc.ec.europa.eu/data.php
[3] https://sedac.ciesin.columbia.edu/data/sets/browse?facets=theme:poverty
[4] https://data.noaa.gov/metaview/page?xml=NOAA/NESDIS/NGDC/STP/DMSP/iso/xml/4393.xml&view=getDataView&header=none