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1 July 2020

<center>Implementation Project - Project Plan
CS 410: Explorations in Data Science</center>

OBJECTIVE (1 - 2 sentences)

Our objective is to explore the process of data collection and to develop a heat map or a 3D map in attempts to analyze the educational inequalities on a national level. The map will highlight features such as, household income, age, sex, and education.

APPROACH (1 - 2 paragraphs)

The datasets that we will be using are:
1. "By County Data Sets on Education, Poverty and Median Household Income" (https://www.ers.usda.gov/data-products/county-level-data-sets/)
2. "By County Demographics for Each State in US" (https://www.ers.usda.gov/data-products/county-level-data-sets/), and
3. "School Funding Fairness Data System" (http://www.schoolfundingfairness.org/data-download)

Our approach consists of finding the appropriate data set(s) to use, modeling the data, and then analyzing the results. For modeling, we will be implementing a heat map. The heat map will be on a national level. Once we have built the map, we can determine if there are any relationships between the selected features.

Implementation will be developed using Javascripts React framework and the resulting project will be hosted using github pages. The libraries used to implement the project will include leaflet and heatmap-react.

TEAM STRUCTURE (3 - 4 sentences)

The two main parts to this project are implementation and evaluation of the heat map. We will divide work as we see fit. Our goal is to finish the coding aspect of the project and then work on the research paper.

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PROJECT MILESTONES (~5 milestones)

1. Research and highlight communities with high minority populations and/or low education funding. 07/28
2. Obtain a data set and clean the data if necessary. 07/14
3. Build a heat map to provide a visual representation of the data. 07/21
4. Discuss and analyze the results. 08/06
5. Write the final research paper. 08/13
6. Present the final project to our peers. 08/06