Capstone 2 Project Proposal

Problem / Question to Answer:

From 2000 to 2019, how has the influence of education on unemployment changed? Are unemployed people more likely to have a high school education, college education, or neither? Are these influences the same for all types of county urban classifications (i.e. cities, suburbs, towns, and rural areas)?

Can a predictive model be constructed to determine the unemployment status of a person, given their region and education level?

Why Answering Our Question Matters and Aim of Project:

A high school diploma has been the benchmark for standard education in the USA for decades. More and more young students are choosing to go to college after high school. As college tuition costs rise, there are many important questions about our education system that should be asked: is high school education enough to land a job?; is college education required?; is getting a job even related to education level?; do different regions of the US have differing relationships?; do some regions have LOW education levels and HIGH employment rates?

The ultimate aim of such an investigation is to determine the value of education levels in different regions of the US with regards to becoming employed. As a country, it is important to know how effective the education system is with regards to getting a job. If it is ineffective at doing so, it may be time to rethink the way we do education.

General Expected Procedure:

I plan to start by understanding the 3 data sets I have for this project and merge any and all sets that have valuable information. A description of the information in each data set can be found below in the section titled “Data”.

I will look into the unemployment rates in counties in the USA, determine education level rates in those counties, and determine correlations between education and unemployment for each county. I will also explore those relationships between counties by their urban classifications: city, suburb, town, and rural area. Could urban classifications affect how educated someone needs to be in order to find employment?

Lastly, I will attempt to build a predictive model that will predict a person’s employment status based on their education level and region of the country.

Data:

- **“unemployment.csv”** - A dataset containing unemployment numbers and percentages per county per state in the US. "County-level Data Sets." USDA Economic Research Service, US Department of Agriculture. Access date: Sept 8, 2021. URL: https://www.ers.usda.gov/data-products/county-level-data-sets/
- **“education.csv”** - A dataset containing the education level of adults in the US by county, giving the count and percentage of adults of various education levels.
- **“UIC_codes.csv”** - A dataset containing the 2013 Urban Influence Code of each county. Each county is identified as one of the following: *"City", "Suburb", "Town", and "Rural".* "Urban Influence Codes." USDA Economic Research Service, US Department of Agriculture. Access date: Sept 8, 2021. URL: https://www.ers.usda.gov/data-products/urban-influence-codes/#:~:text=The%202013%20Urban%20Influence%20Codes,to%20metro%20and%20micropolitan%20areas.&text=An%20update%20of%20the%20Urban,is%20planned%20for%20mid%2D2023.