Project 1 Speaker Notes

* My goal for this project was to analyze the link between various types of energy usage, and the associated CO2 Emissions by Country. After cleaning and merging, the Dataset I used contained data from 40 Different Countries, with data spanning from 2010 to 2019
* First, I looked at the Total CO2 Emissions compared to the Total Non-Renewable Energy Usage by each Country for each Year. After filtering the Data down to contain only Non-Renewable Energy Sources, and then plotting the resulting data against the CO2 Emissions for the associated year, I performed a Linear Regression to determine the correlation, and a t-test to determine the statistical significance.
* With an r-value of over .99, and a t-test derived p-value of significantly less than .05, there is a very strong statistically significant correlation between the usage of Non-Renewable Energy and CO2 Emissions
* Next, I filtered the Dataset down to the countries with the 5 highest and lowest mean CO2 Emissions over each of the years. I then took those countries and got the mean percentage for each Type of Energy over each year. The resulting chart shows how much of each Type of Energy the Countries with the highest and lowest CO2 emissions use.
* As you can see, the most notable differences are in Hydro, Coal, and Natural Gas. As expected, the counties with the Highest CO2 Emissions got around 42% more of their energy from Coal, 17% more from Natural Gas, and 36% less from Hydro.
* Interestingly, from the selected countries, the Countries with the Highest Emissions used around 6% more Wind Energy than the lowest Emission Countries.