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DSC530 - Data Exploration and Analysis

Professor Metzger

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**Final Project**

**For this final project I wanted to analyze the cost of living, minimum wage and median household income across the US by county. I wanted to see if either the minimum wage or the median household income had a major effect on the cost of living. I also wanted to see how sustainable living on either of these incomes would be in different counties in America.**

**When looking at the minimum wage, it was quite clear that it had little effect on the cost of living. The PMF analysis where I divided counties into minimum wages over and under $12/hour, were largely identical. The scatterplot also showed that a wide range of costs of living were present across all minimum wages. I also found it disheartening to see such a large part of the minimum wage vs cost of living ratio histogram was covered at about the 40% range, and that no minimum wage worker had a ratio above 1. This would mean that all minimum wage workers are not earning enough to sustain themselves.**

**When looking at the median household income, there was a medium positive correlation between that and the cost of living. I think that the cost of living is a very complicated variable that can’t be explained in one statistic, and my analysis agreed with that notion. Two elements stuck out in my analysis, one that there were a significant number of counties where even the median household income vs cost of living ratio was less than 1, where even average families can’t afford to sustain 1 person. Another thing that stood out was just how perfectly the lognormal distribution model fit, although I do wish I understood exactly what this meant more.**