

Final Project Essay

The basis for my statistical analysis was whether there exists a relationship between employee satisfaction and employee productivity. The outcome of my Exploratory Data Analysis was somewhat inconclusive, as the many tests performed revealed inconsistent information as far as the research question was concerned. For my research, my null hypothesis was that there does not exist a relationship between satisfaction and productivity. After performing a Permutation Test at the end of my research, I was able to reject the null hypothesis and accept that there is a relationship between the two variables. My scatter plots don't show any correlation between satisfaction and projects completed and feedback scores, which are two indicators of an employee performing on target. I felt secure in concluding that they are fair indicators since projects completed would show an objective level of contributions by an employee, a feedback score would contextualize whether or not an employee has been productive in terms of their role, which may require them to complete larger projects at a slower rate.

I feel as if my regression analysis and analysis where I was enabled to select my own tests would have had more conclusive and aligned data if I was more experienced in making such selections. However, I feel that there are also variables that were not present that could have either better contributed to the analysis, or better contextualized the results of the testing. This includes:

- Length of employment (as I was unsure of how to manipulate starting date to infer this metric)
- Previous years data

While performing my tests, I had been under the impression that projects completed and feedback scores would be two factors that effectively comprised productivity, instead of loosely contributing to it. This inevitably turned out to be an incorrect assumption, as we can see between the scatter plots including the two variables and p-score relating to productivity, as they relate to satisfaction.

I faced a lot of challenges with some of the earlier tests, including the descriptive characteristics and PMF simply by virtue of them being earlier on in the course, and the process of determining each not being fresh in my mind. Histograms were an exception to this, as they were simple enough to perform without needing to review how they are coded.