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| Title | Impacts of Trade on national productivity and well being   * Slide1 |
| Describe the core message or hypothesis for your project | * Slide2 * If GDP of a nation raises, will the trade values and well-being indicators such as life expectancy will raise as child mortality decrease. * If GDP of a nation increases, will the need for export will decrease, leading to lower export rates for nations with the highest GDP rates. |
| Describe the questions you and your group found interesting, and what motivated you to answer them | * Slide2   We were most interested in first seeing the strength of the relationship between GDP and trade values(import/export), with the expectation of export need to decrease in correlation to GDP increase. Then we were interested in seeing how the trade values and GDP would relate with wellbeing of a nation. The main motivation is to best identify how to increase wellbeing in a nation. |
| Summarize where and how you found the data you used to answer these question | * Slide3   Originally, we started with a download of data for both GDP and World Development Indicators on Kaggle.  The issues we ran into include not being able to find matching columns to combine the 4 different data sets, as well as realizing the years presented in each set of data did not give us a clear picture. This led us to seek out more updated and cleaner data from Worldbank. |
| Describe the data exploration and cleanup process (accompanied by your Jupyter Notebook) | Merge files to create Master DataFrame with Jupyter Notebook.  Types of Joins/Merges  Summary\_df = GDP\_per\_Capita.csv & Life\_Expectancy.csv: CountryCode  Summary\_df = Summary\_df & Infant\_Mortality.csv: CountryCode  Summary\_df = Summary\_df & Exports.csv: CountryCode  Summary\_df = Summary\_df & Imports.csv: IndicatorName  Clean the data with Jupyter Notebook.  o  Use DropNa function with how = “all” argument to remove rows with  null values.  o  Sort values of whole master dataframe by the GDP per capita values. |
| Describe the analysis process (accompanied by your Jupyter Notebook) |  |
| Summarize your conclusions. This should include a numerical summary (i.e., what data did your analysis yield), as well as visualizations of that summary (plots of the final analysis data) | * Slides – 4-7 * Scatter plots and analysis |
| Discuss the implications of your findings. This is where you get to have an open-ended discussion about what your findings "mean" | * Original theory holds true in regard to GDP increase leading to wellbeing increase, but we were surprised to learn GDP increase does not necessarily mean lowered export. I fact, import & export generally move up and down together and both contribute to a higher or lower GDP. * Looking at all countries plotted year over year, did not seem to show much difference, while taking the overall average of all countries year over year showed a strong relationship between wellbeing and GDP (Power of averages) |
| Tell a good story! Storytelling through data analysis is no different than in literature. Find your narrative and use your analysis and visualization skills to highlight conflict and resolution in your data | Finding data > issues encountered > find new cleaner and more consistent data > merge data > clean data > explore data > finding > how we came to findings > interesting/surprising and/or issues > conclusion |