MIS380 Project - <https://mediaspace.minnstate.edu/media/PaulM+Retro/1_c1rkt1yi>

1. Explain why you chose the data set that you did.

I work in the economic development field helping cities and counties with development plans and anticipating trends with regard to housing demand and pricing. The data I chose to use was year over year housing price change by state from 1976 to 2021. I then added the years in which each state had, if ever, legalized recreational marijuana and tracked the difference in housing change with their new, legalized status. This would provide a simplistic basis for additional study.  
b. Describe why you created the pivot table that you did. How does your pivot table help users  
analyze the data?

I created a pivot table that displays states as row labels and then years as column heads. The records show change per year. I added slicers to the pivot table to allow the user to toggle between states that have legalized recreational use, haven’t, or both. I also allowed the user to toggle years and states to gain further insight. This allows for a very binary interaction for developing questions about legalization impact on housing price change and further analysis.

c. Explain why you chose the chart that you did for your report.

The purpose of the final chart for the report was to get to the heart of the question of whether legalization policies and law had a potential impact. As this is a national issue we are looking to summarize the current state of state by state impact it made sense to have a map with overall post-legalization changes. This map shows the difference in the rate of change from pre-legalization average, to post-legalization average. The results show a mixed outcome and that it is not definitive that legalization was a leading consideration. This is due to the strong effects of COVID19 on the housing market.   
d. Describe the KPIs that you chose for your dashboard and why you chose them.

The KPIs I chose were Change in Housing Price as a percent over time per legalized state, Difference between pre and post legalization in legalized states and overall change in Housing price in all states.

The first KPI was chosen for the comparison of impact of legalization within the state as an isolated case. We could also observe trends over time and see if they are replicated in other states. Finding a boom/bust cycle.

The second KPI was to see the overall change pre and post legalization in each state. This was to better understand overall impact in the state and summarize outcomes to that point in time.

The third KPI was to assess the state of each states’ housing market over time. This was to also gauge the market in state where legalization ever happened and to observe them as a sort of control.

e. Describe what went well on the project. What were the high points?

The mapping went much better than I thought. I was fun to see changes and states added as legalization as achieved in states over time. What are the high points… that is funny.   
f. Describe the challenges and issues you encountered during the project.

The data was very difficult to work with for the type of analysis I wanted to do. Additionally, confounding issues with COVID and other housing trends made it difficult to work with.  
g. Explain how you overcame the challenges your encountered during the project.

I did a lot of manual cleaning that I would usually do with automation. Also, sometimes you just need to acknowlegdge the issues, present them as an issue and move on.  
h. Describe what would you do differently if you had the project to do over again. What are your  
takeaways or lessons learned from this project?

Spend more time looking at the other leading indicators for housing and weight them with legalization to get a more balanced dataset. Then perhaps use a principle component analysis or cluster states by leading independent variables to find where the changes are coming from for each state.