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How we got the data:

Through Geoapi and FBI.gov we collected data on crime rates in areas.Casino Cities were only picked if they previously did not have a casino in order to avoid bias. The parks near casino data was gathered by taking a 5000 meter radius around each casino and counting the number of parks near each one. Parks was used as a proxy for Family Wellness. All figures can be found below or in github:https://github.com/Ethan-sev/ET_Project.git . More information on these parks and their impact can be found here:

https://library.weconservepa.org/library_items/729-The-Benefits-of-Parks-Why-America-Needs-More-City-Parks-and-Open-Space#:~:text=City%20parks%20and%20open%20space%20improve%20our%20physical%20and%20psychological,a%20city%20and%20its%20people.

Park Data:

Part one of this study was dedicated to finding differences in leisure parks between Cities that had a casino and didn't have a casino. Below is a representation of parks in casino cities and parks not in casino cities. In order to properly test this we run a two-tailed T test with a null and alternative hypothesis. In the end we fail to reject the null and there is no statistical difference between the mean of parks in a city and parks not in a city.

Crime Data:

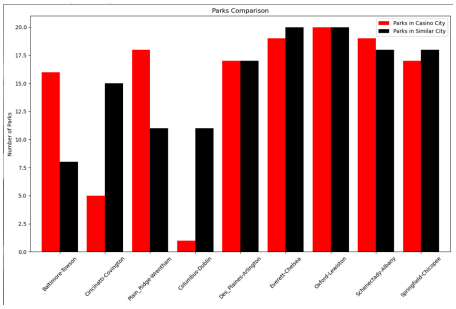
For the second part of the project we looked at the crime data for the same cities as before in part one and captured this data on the FBI Crime Data Report website where we collected the most prominent police department in each city that we looked at and the crime rates of those police departments over the 2010-2022 time period. From there we created a dataframe that contained all the previously recorded data. The one problem with this data is that some cities had way higher crime rates than other cities and the reason for this was because some cities like Baltimore had a much higher population than smaller cities like Oxford, causing the data to be unproportionate. We fixed this issue by converting the data to per 1000 residents

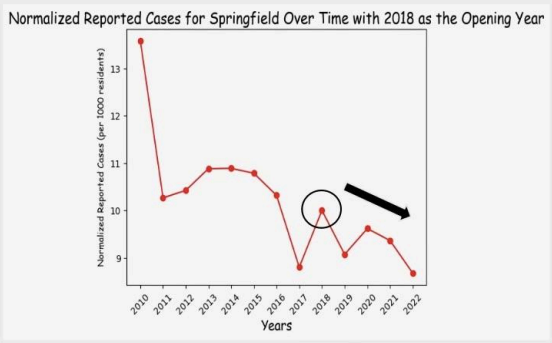
by using the total populations of the cities that were reported. As pictured below we then created many different line charts and showed when the casino was established so we can clearly see if there are any possible trends. Unfortunately there was very little noticeable trends within the line graphs.

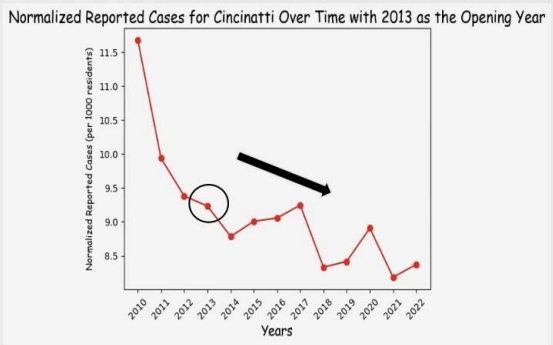
After the line graph we had to run a t-test of the data to see if there was a difference between the mean of all the cities crime rates before the casino was established as opposed to after. Unfortunately we were unable to reject the null hypothesis and we were unable to confirm any specific correlation between the data.

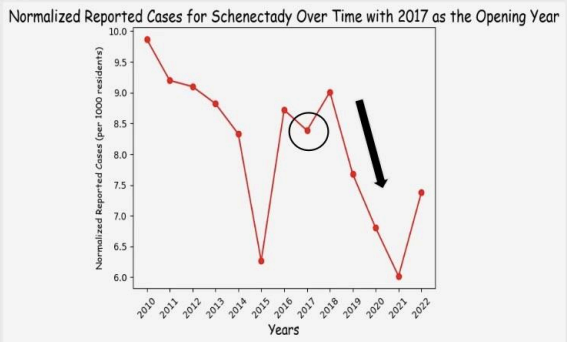
Next we looked at the data as a whole and tested if the data is indeed representative of the entire population because if it was not then the entire point of the project would be useless. We gathered population data from the same FBI website just used the US national data over the same time period. After doing another t-test we were able to reject that there is a statistical significance in the sample and population mean.

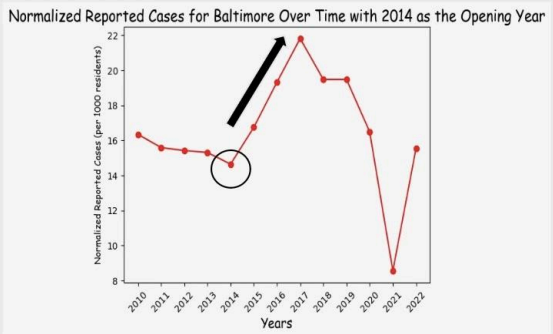
Finally, future work could include more cities or maybe examine more police stations in each area to get a better number of crimes in each area. According to our findings there is reason to believe that casinos cause many net benefits to cities especially from an economic











City	series	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Opening Year
Baltimore	Reported	9316	8886	8789	8725	8346	9542	11010.0	12430.0	11100.0	11101.0	9398.0	4880.0	8861.0	2014
Cincinatti	Reported	3615	3076	2903	2858	2719	2788	2803.0	2862.0	2579.0	2605.0	2757.0	2533.0	2591.0	2013
Clark_County	Reported	239	248	283	245	298	338	323.0	331.0	261.0	282.0	357.0	352.0	348.0	2015
Columbus	Reported	5472	5228	4808	4446	4640	4758	4694.0	4594.0	4586.0	4637.0	5233.0	5547.0	4082.0	2012
Des_Plaines	Reported	57	61	65	56	53	50	51.0	61.0	39.0	56.0	43.0	77.0	69.0	2011
Everett	Reported	228	195	171	202	175	151	156.0	152.0	176.0	251.0	181.0	142.0	169.0	2019
Oxford	Reported	21	23	19	16	11	20	18.0	28.0	16.0	25.0	26.0	35.0	12.0	2012
Schenectady	Reported	679	633	626	607	573	431	600.0	577.0	620.0	528.0	468.0	414.0	508.0	2017
Springfield	Reported	2093	1582	1606	1677	1678	1662	1590.0	1356.0	1541.0	1398.0	1482.0	1443.0	1337.0	2018