THE BATTLE of NEIGHBORHOODS
Applied Data Science Capstone Project

Salih S Ayhan

Introduction

Colorado is the largest state in central United States and is currently growing. For those who want to move to this state, I will try to compare the 2020 rents by county in order to give them the best information to prepare for the Colorado rent prices.

- Which areas have the most favorable rent
- Making the Colorado temperature map

The data on apartments: number of rooms, counties, and price is collected by scraping a website with data listings (rentdata.org/states/colorado/). We clean up the values and calculate average price by county. The data is pre-processed and we get our first data frame:

For Year 2020;

	CountyName	0BR	1BR	2BR	3BR	4BR	Average	Latitude	Longitude	Year
0	Adams County	1114	1260	1566	2163	2488	1718.2	39.873634	-104.337935	2020
1	Alamosa County	606	609	749	984	1162	822.0	37.572892	-105.788287	2020
2	Arapahoe County	1114	1260	1566	2163	2488	1718.2	39.649772	-104.339219	2020
3	Archuleta County	693	698	919	1171	1605	1017.2	37.193596	-107.048329	2020
4	Baca County	606	609	714	1030	1254	842.6	37.319183	-102.560469	2020

For Year 2019;

|	CountyName	0BR	1BR	2BR	3BR	4BR	Average	Latitude	Longitude	Year
0	Adams County	1029	1204	1508	2119	2461	1664.2	39.873634	-104.337935	2019
1	Alamosa County	662	666	791	1052	1212	876.6	37.572892	-105.788287	2019
2	Arapahoe County	1029	1204	1508	2119	2461	1664.2	39.649772	-104.339219	2019
3	Archuleta County	752	756	954	1251	1479	1038.4	37.193596	-107.048329	2019
4	Baca County	596	604	700	1012	1230	828.4	37.319183	-102.560469	2019

Methodology

- We will use the 'plt' function to visualize the change of average prices by year.
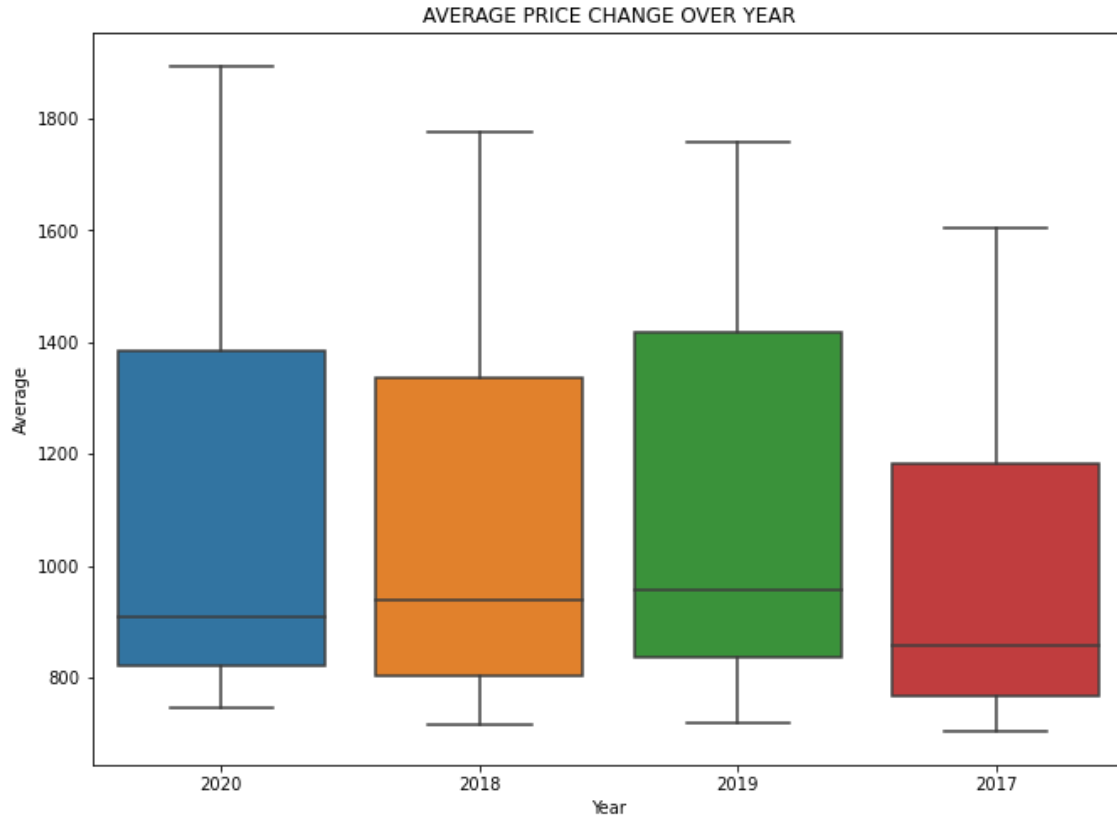
- Three Bedroom apartments are most common apartment rented by a nuclear family. So, we will use 3BR apartments and the average price data of 0BR, 1BR, 2BR, 3BR, and 4BR apartments to get a general idea of Colorado rent marketing.

colorado 2020 rent market for 3 bedroom apt. by Counties
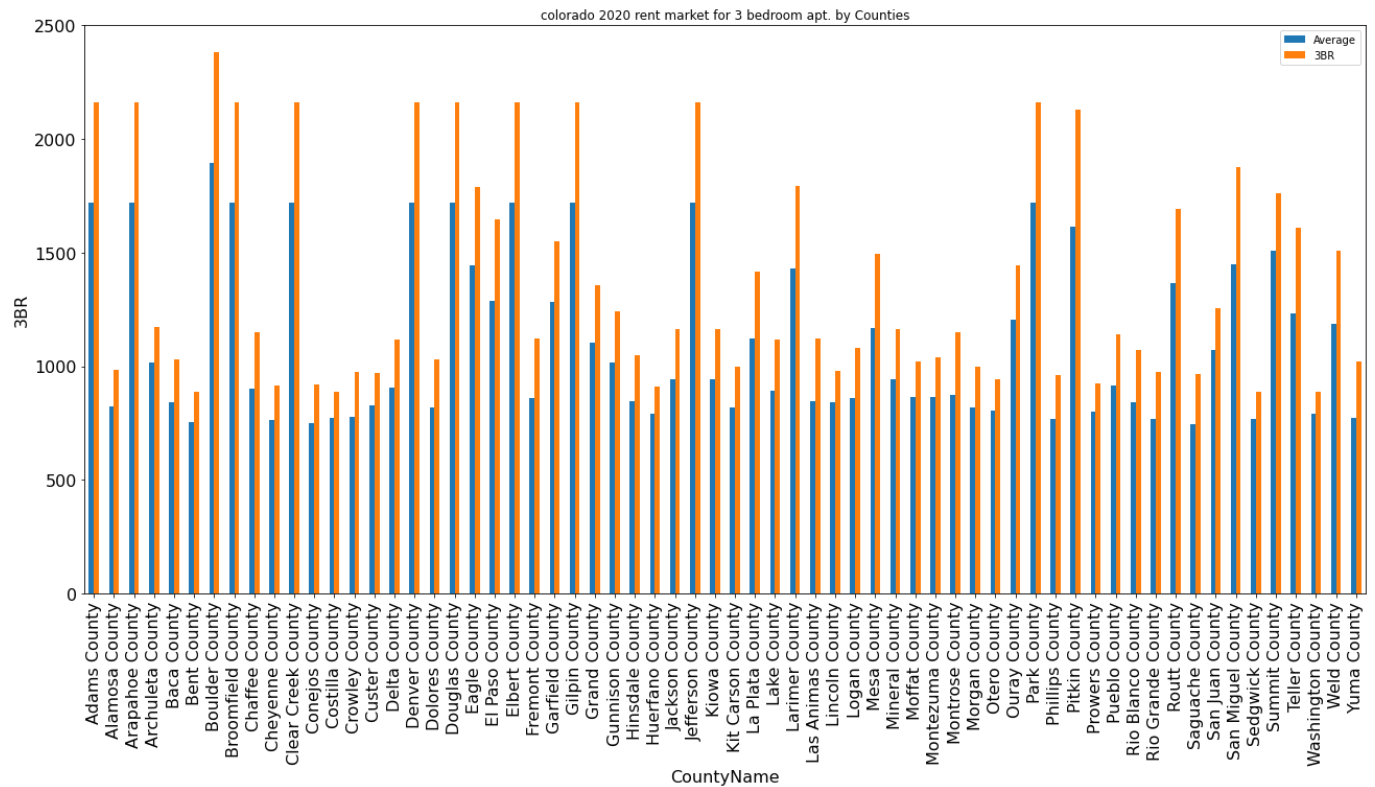
- We used Json data to collect Colorado County Boundaries from data-cdphe.opendata.arcgis.com and used it with our data frame to make our map.
- We will add popup markers in the map to show Average price, 3BR and County Name when you click on each county.
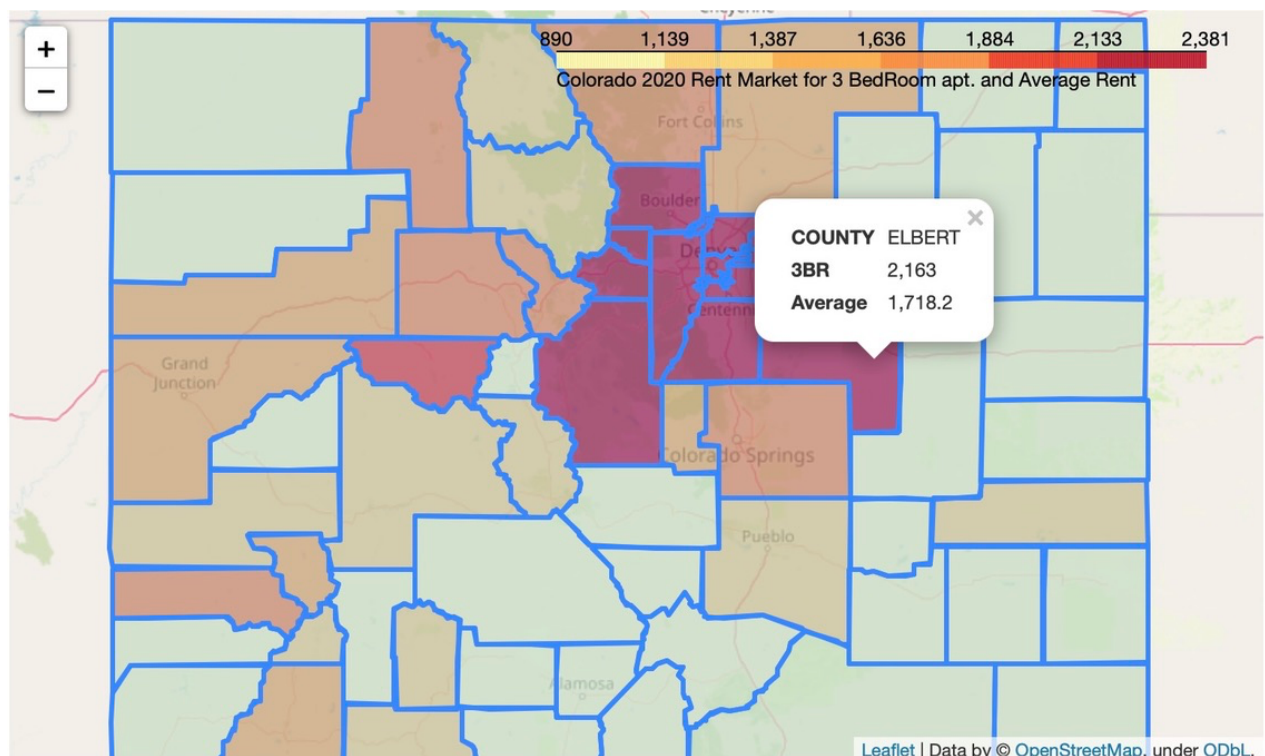
Discussion & Conclusion

As we see on the map, the most expensive region of Colorado is the capital city of Denver and the surrounding counties. During this project we applied different data science methods in order to answer our main question of which county in Colorado has the most expensive rent. We used Web Scrubbing methods to analyze the Colorado market rent data by year and we added this data on the volume map. We built a Colorado Choropleth map.