



Colorado Housing Market Trends

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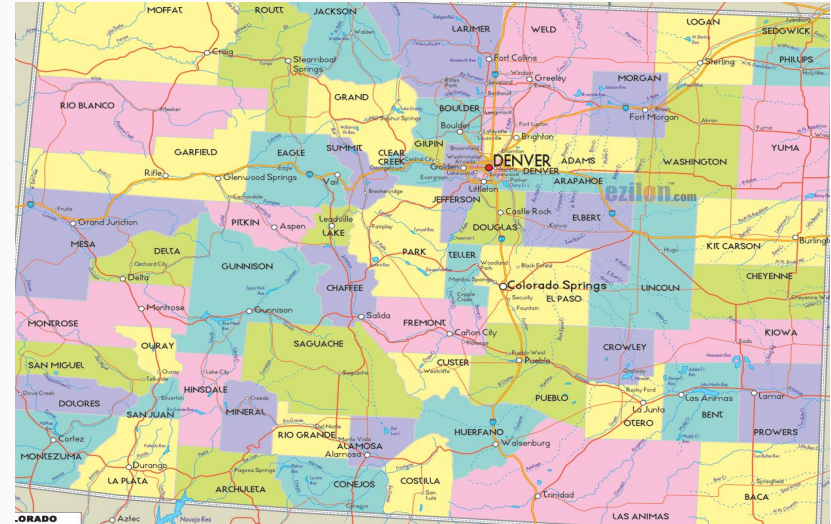
Selected Topic

Part 1:

- Housing affordability in the State of Colorado and the potential of average income earners becoming unable to become homeowners within the state broken down by county

Part 2:

- Using additional data to find, compare, and predict activity between housing affordability and parameters other than average income
 - GDP increases/decreases, educational levels, population, etc.



Question/Source of Data

- Who is being priced out of the housing market in Colorado?
 - Bigger question is why, and how ?!
 - Can we find relationships in economic and social data at the county level to explain changes in the housing market?
- Zillow - State of Colorado Housing Data
 - Broken down by:
 - Month by month housing prices
 - Per county (1997-2016)
- The State of Colorado - Household Income Data
 - Broken down by:
 - Year by year median household income
 - Per county

Data Exploration

- Analyzed a handful of databases to find relevant data that helped answer our question
 - Sources?
 - Kaggle
 - Zillow
 - US/State level data
- What sort of data were we looking for (state of Colorado)?
 - Median household income
 - Change in housing prices year to year
- After initial conversation, we decided to extend our search to include housing price relationship with:
 - Population of a certain county
 - GDP
 - Broken down by economic industries
 - Agriculture, mining, services, etc.

Description of Analysis

- Develop a question to form our topic
 - Who is getting price out of the housing market in Colorado?
 - Breakdown of household income (median) and housing prices
 - Dates range that includes statistics from 1997-2016
- Choose a dataset(s)
 - Determined relevant data to our question: includes housing data (zillow) and household income (labor and employment data; State of Colorado)
- Clean the data
 - Housing
 - Averaged monthly housing prices to get a single number yearly average for each county in Colorado
 - Allowed us to combine our data with the median household income data given yearly
 - Median Household Income
 - Filtered out unneeded columns and rows
 - These included population metrics, as well as other income calculations

Description of Analysis (cont.)

- Clean the data
 - Additionally used Jupyter Notebook to combine our two datasets
 - Eliminated irrelevant columns
 - Dropped rows that do not contain complete information (as is the case for some counties)
- Housed/stored our data
 - Used PGAdmin, once cleaning was complete
 - Eventual transition to Javascript to display our findings

Storyboard/Dashboard

- Visuals elements will include three :
 - Interactive map (county level)
 - Line graph showing change of the level of household income year to year
 - Line graph depicting housing price and its relationship to household income