

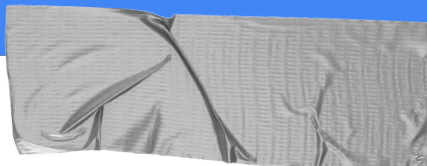
# Austin Housing & Income Analysis

A Springboard Capstone Project  
by Brian McNamara



# Goal

Using statistical analysis methods available in RStudio, analyze the changing income and housing data of the Austin Metro Area.



# 1. Intro

- The Austin Board of Realtors says the median home price was up 14 percent in April 2015, compared to the same month last year (2014), to \$274,000\*.
- In October 2015, the Austin Metro Area population surpassed 2 million people. Only five years earlier in 2010, the population was ~1.7 million. An increase of 23.53%.
- *With such an increase in demand, is the supply remaining affordable? Are rent and housing values rising? Are incomes rising as well?*

Sources:

\* <http://kut.org/post/austin-home-prices-hit-another-record-april-2015>

\*\*<http://www.bizjournals.com/austin/news/2016/05/19/atxsubcounty-population-growth.html>

# What's Next?

To analyze this problem, an analysis of Household Incomes, Rent prices, and Homevalues is needed.

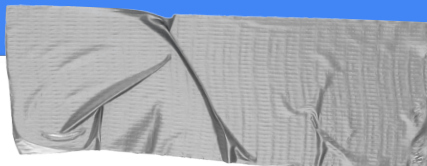
Let's look at these datasets...

- Zillow Data for Home and Rent Values

<http://www.zillow.com/research/data/>

- American Community Survey for Med. Household Incomes

<https://www.census.gov/programs-surveys/acs/>



## 2. Methods in RStudio

### → Import the data

Import the csv data from both sources for the Austin Metro Area.

### → Data Cleaning

Show them a specific person who would benefit from your solution.

### → Data Visualization

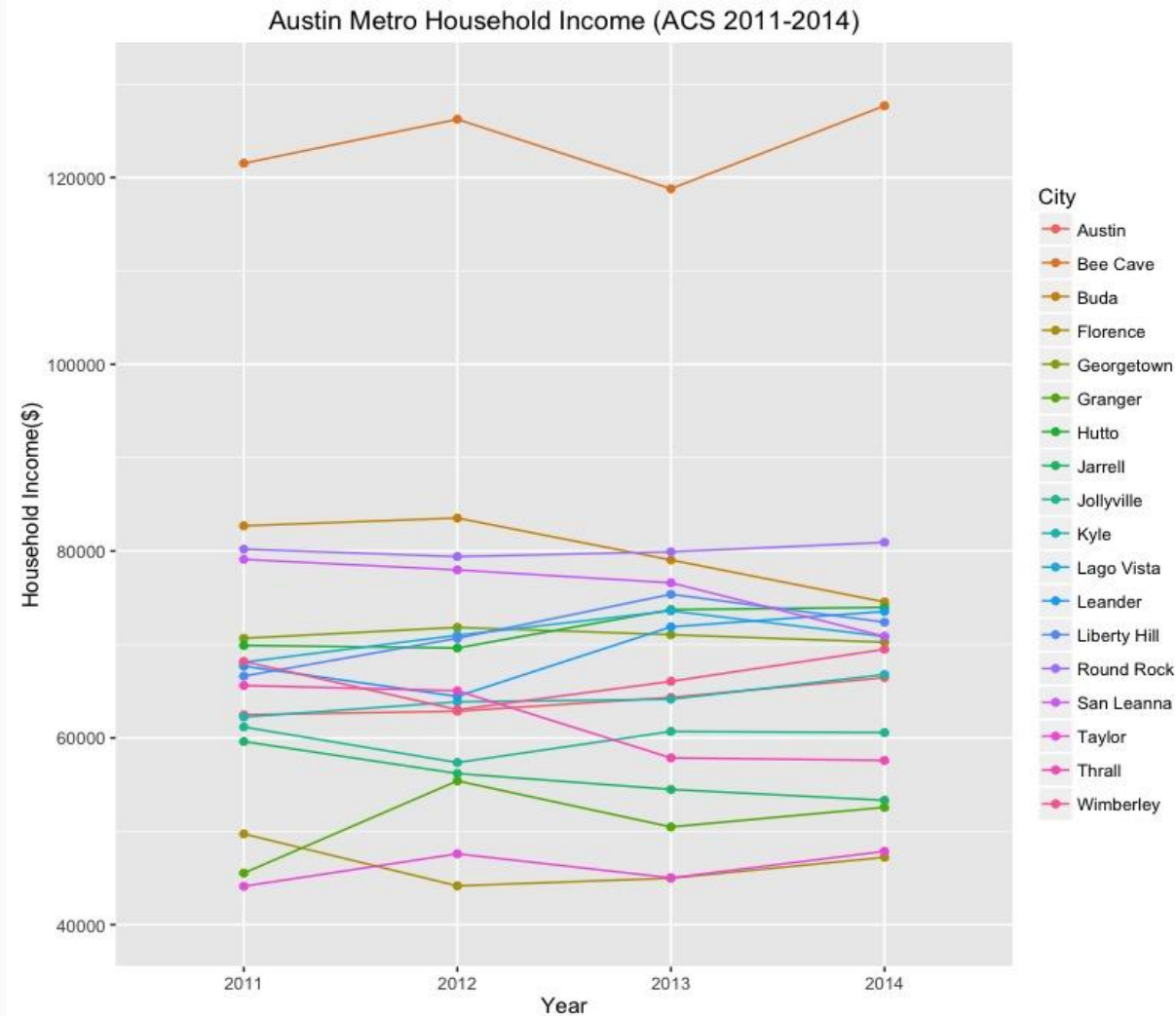
Using ggplot, create graphics to understand the data more clearly

### → Model

Using ggplot, create graphics to understand the data more clearly

# Data Visualization with ggplot

As the graph illustrates, some cities have seen household incomes fall, some rise, and some remain general flatt over the years.

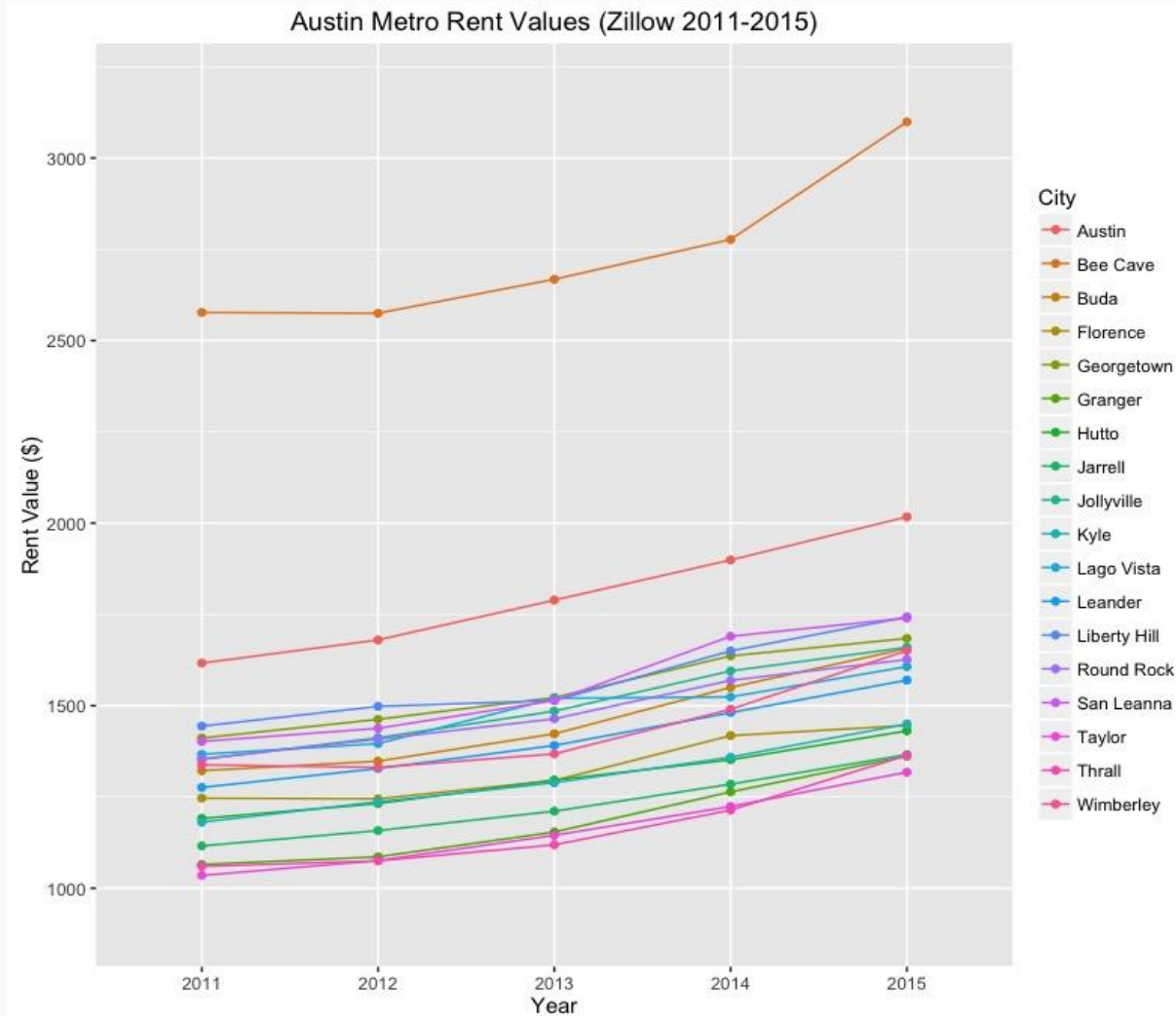


City
Austin
Bee Cave
Buda
Florence
Georgetown
Granger
Hutto
Jarrell
Jollyville
Kyle
Lago Vista
Leander
Liberty Hill
Round Rock
San Leanna
Taylor
Thrall
Wimberley



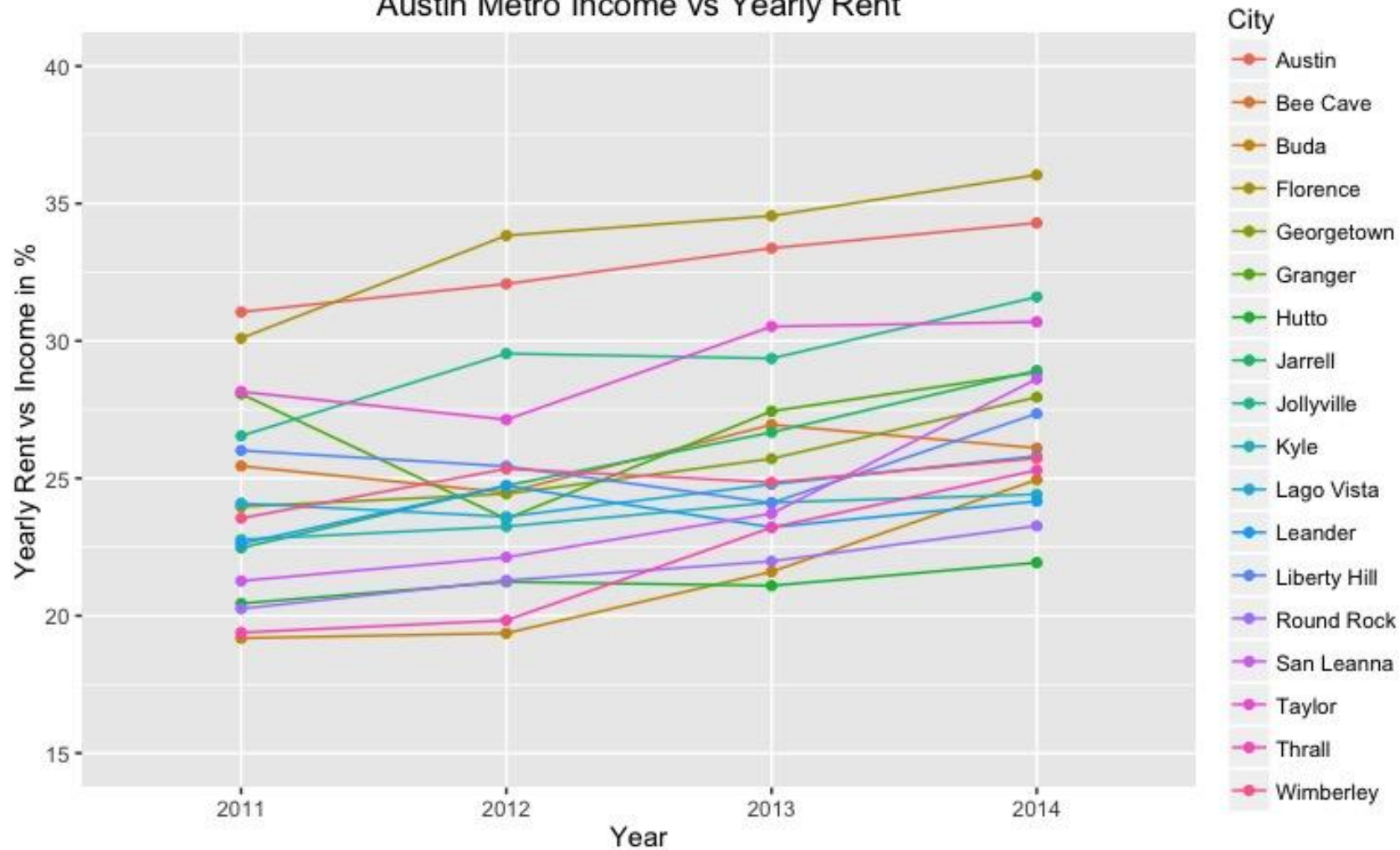
As the graph illustrates, the entire metro area has seen an increase in home values from 2011 to 2015.

As the graph illustrates, the entire metro area has seen an increase in rent values from 2011 to 2015.





# Austin Metro Income vs Yearly Rent



# Results

Home values and Rent prices have increased since 2011.  
However, not all cities have seen as a dramatic rise income.  
The final graph shows the increase in percentage that rent makes up household income.