Supplementary Notes for Presentation

Exploration:

* Visiting federal and local government websites
* Downloading CSVs where available or performing API calls (for Census.gov)

Cleanup:

* Convert CSVs and API calls to data frames in Pandas, using Jupyter Notebook
* Filtered relevant location data out of broader collection of US data.
* Exported clean data to new resources directory folder in CSV format.
* Merged clean data into new data frames in Pandas.

Insights (Unanticipated):

* Gentrification in East Austin.
* Poverty rate twice as high for black community as for white/Asian community.
  + Higher concentration geographically.
* Tax bracket differences: Greater adjusted gross income among top bracket.
* Per capita income increases with population increase.
  + Poverty rate has decreased across all ethnic groups.

Problems and Solutions in Data Exploration:

1. CSVs from some sources had legends that had to be removed from the CSV.
   1. Workaround: BEA.gov and IRS.gov: Removed manually from CSV
2. BEA.gov/Census.gov CSVs contained nested columns/headers.
   1. Census.gov: Use the API call to cherry-pick needed data.
3. Data size (200 MB). Slowed down computer, needed manual trimming.
   1. Use an API to select desired data.
   2. Pulled large CSVs into Pandas, cleaned, and exported a smaller CSV.
4. Developed functions to help produce visualizations efficiently.

Additional Questions:

1. We were able to analyze some cities in relation to Austin in a general way. Given more time, we would like to perform an analysis of other similar-size cities to the same depth for which we analyzed Austin.
2. We would like to drill down further into how education, employment, and tax brackets are broken down by ethnic groups.
3. We have the data cleaned and prepared to drill down into existing Austin data. Existing code could be modified to examine these categories for other cities. This information could be developed in a further

Resources

* U.S. Bureau of Labor Statistics (<https://www.bls.gov/oes/2018/may/oes_12420.htm>) (CSV)
* U.S. Bureau of Economic Analysis (<https://www.bea.gov/data/by-place-county-metro-local>) (CSV)
* U.S. Census Bureau (<https://www.census.gov/>) (API call)
* U.S. Internal Revenue Service (irs.gov) (CSV)
* City of Austin (<https://data.austintexas.gov/>) (CSV)