Home Value App Documentation

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About the application

This application is designed to monitor the average value of homes across the United States using data from Zillow. The user can compare home values on a county level using a line graph and interactive map.

The app can be ran locally, needing only two files: app.R and data.R. All data is downloaded from its source within the data.R file, so no external data is needed to run. The application is not available on shinyapps.io due to the size of the data.

Data source

Data were compiled from Zillow and the tigris package, which easily loads TIGER shapefiles from the United States Census Bureau into R. All these data are publically available.

Functionality

On the *Plot and Table* tab, the user is presented with three inputs and two outputs. The plot allows the user to visualize the average home value over time in a specific state and for a specific size home (as determined by the number of bedrooms), which can be selected using the inputs to the left. The plot shows a line for each county in the state, and the red line is the county specified in the input. Below the plot, the table shows the filtered data used to build the plot, allowing the user to search for individual datapoints.

The *Map* tab provides an overall visual of home values across the country for a specific year (1996 - 2020). The map is interactive and the user can pan and zoom to their will. Hovering over a specific county provides the user with the name of the county and the average home value for the year selected. The user can change the year and the size of the house with the inputs to the left.

The *About the Data* tab provides the user with a general overview of the data behind the app and a link to the source code.

Challenges

The main challenge I had was creating the map. I had little previous experience with spatial data, so it was difficult to figure out how to manage the shapefiles and connect them with the Zillow data.

Division of labor

Solo project.

Further improvements

If I had more time, I would like to incorportate some CSS to beautify the application and make it look more professional. Right now, it's completely functional, but lacks visual appeal. I'd like to design it to capture the reader more and engage them more directly with the data.

Additionally, it would be nice to make an interative plot. The user could hover a specific line and it would show them the name of the county and the average home value at that specific datapoint.

Source code can be found on Github.