ISTE 782: Visual Analytics

Assignment # 6 – Interactive Visualization in R

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1.   Data set

We used the cleaned dataset that we used in Assignments 1 and 2 (San Francisco Airbnb Data). We created two ggplot2 charts and designed two separate Shiny interactive visualizations following the instruction. For the BONUS, we designed one of the Shiny dashboards with two visualizations.

2.   Exploration

The data analysis and shiny dashboard will assist people looking for Airbnb accommodation in the San Francisco area based on various parameters such as price, vicinity, reviews, and minimum night availability. Dashboards can also be used to overview the market and analyze the areas to invest in Airbnb to potentially earn more. The goal of this data analysis and visualization is to identify the potential areas where the return on investment could be profitable while acquiring and listing a house, apartment, or room on Airbnb. Dashboards also enable the users to visualize the areas for affordable prices and different room types. The intended stakeholder of the dashboard is:

- Hosts: People with existing housing available to list on Airbnb in San Francisco (SF). Their intended goal is to increase their earnings by listing their houses for rent on Airbnb. The host could be potential new buyers or investors who wish to purchase houses and list them on Airbnb. The dashboard will provide which are the best-performing areas for them to make informed decisions.
- Guests: People looking for temporary housing may choose from a range of listings offered by the hosts. The guests will have the flexibility to overview the historical data about the hosts, areas, reviews, and prices to make an informed decision.

We acquired Airbnb public data directly from the Airbnb website. The data is high quality. Further cleaning will be applied to remove unneeded attributes and measures. The data will be taken for the last 10 years. The recency of data will be up to date. The output will be provided with an interactive dashboard which will facilitate both types of stakeholders simultaneously.

3.   Static and Interactive Visualizations

We are asked to:
- Create two insightful ggplot2 charts by using the appropriate charts and the features. You will submit one screenshot from each chart. **(Screenshots are attached at the end of this report)**
- Create and design two separate Shiny interactive visualizations with a drop-down menu or any other dynamic layout features submit the published link for each Shiny and one screenshot for each Shiny (so two links, two shots). **(Screenshots are attached at the end of this report)**

4.   Saving and publishing the Shiny products

Using Shinyapps.io as instructed, published Shiny visualizations Links for the Apps are as under (two publications).
Links for the Apps are as under:
- https://muhammad1.shinyapps.io/vis5/
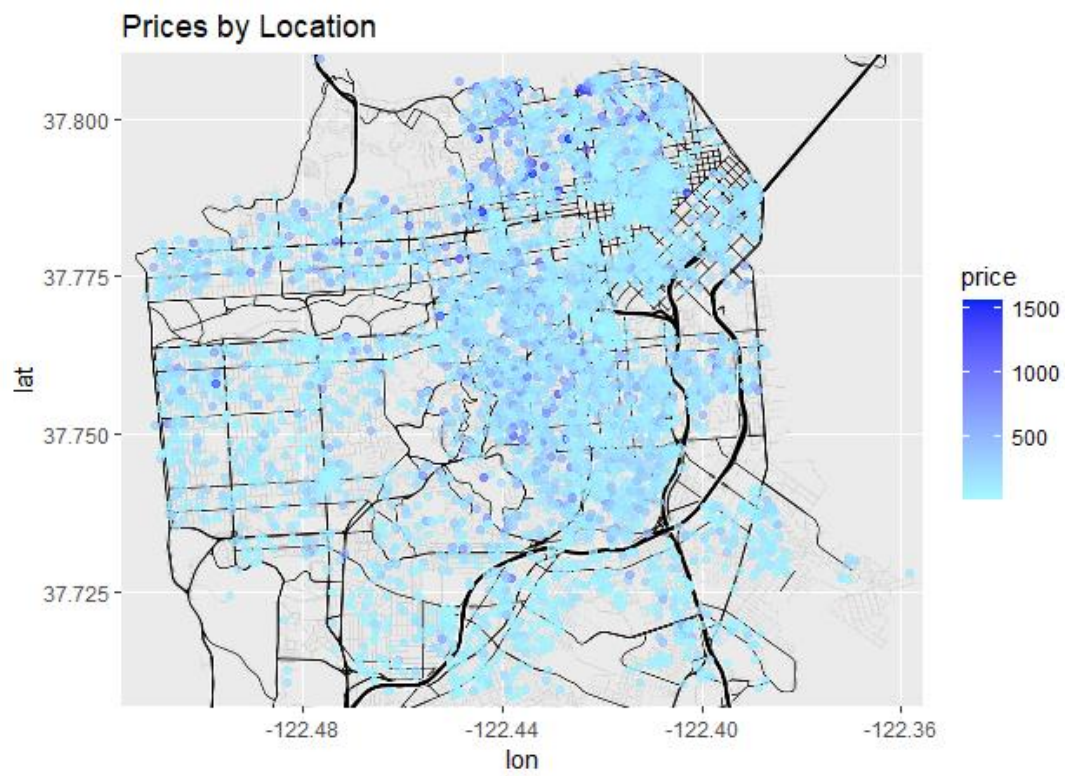- https://muhammad1.shinyapps.io/vis7/

5.   Submission

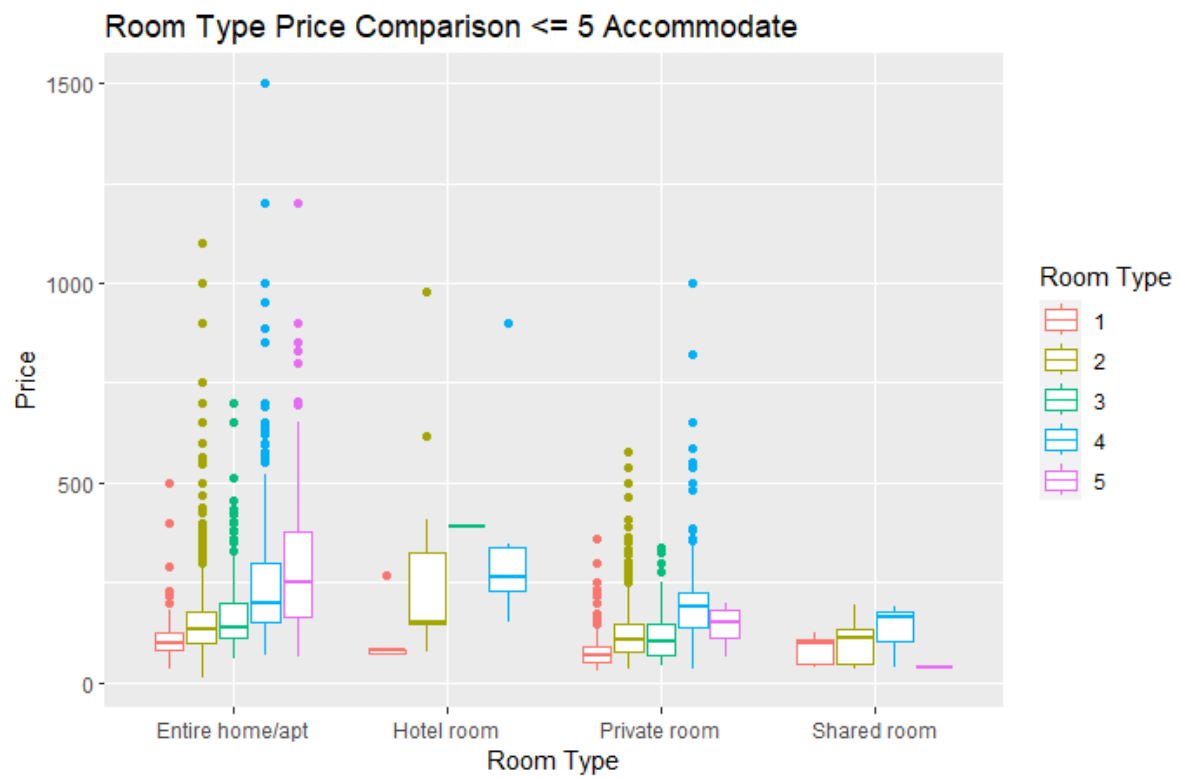(1) Screenshots from each ggplot2 chart (two pics)

(2) Published web links and screenshots from each Shiny apps (two links and two pics)

The screenshots are added below and posted on mycourses. The weblinks are provided above (section 4) and posted on mycourses.
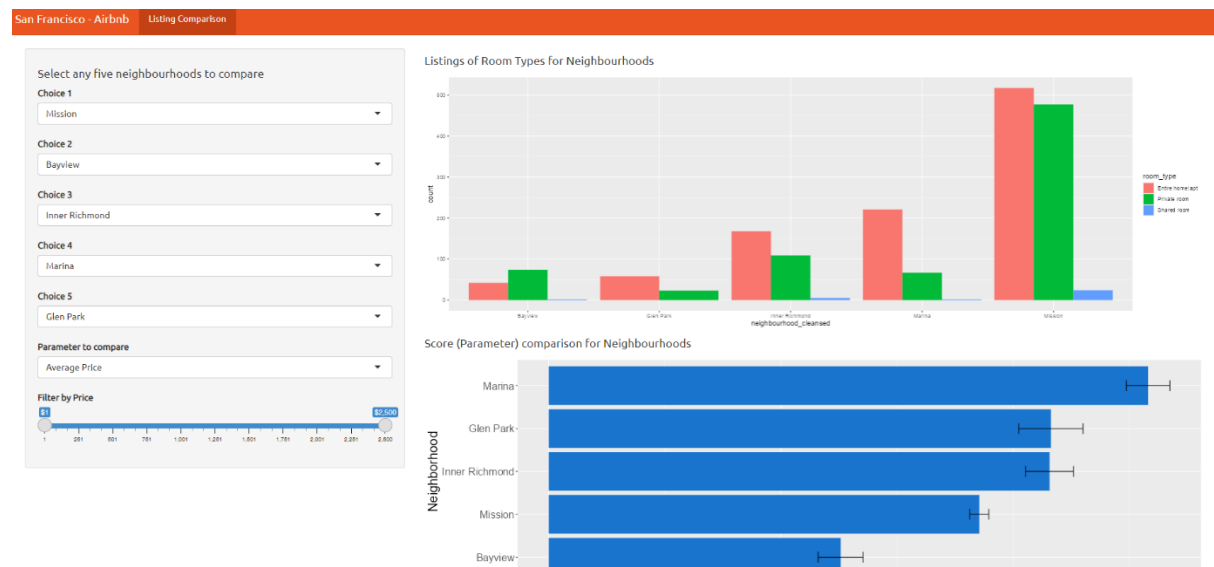
GGPLOT Screenshot 1

GGPLOT Screenshot 2

Shiny Screenshot 1

Shiny Screenshot 2