

Analysis on yelp reviews

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1.Goal

To provide

- Data-driven actionable plan to help business owners improve their ratings on Yelp.
- Key useful, analytical insights from the data (e.g. plots, tables, models, inferential methods, etc.) .
- A demonstration of your Shiny application.

2.Data Cleaning

Limited by the computing power, we chose to focus on some restaurant whose category contained the word “steak”.

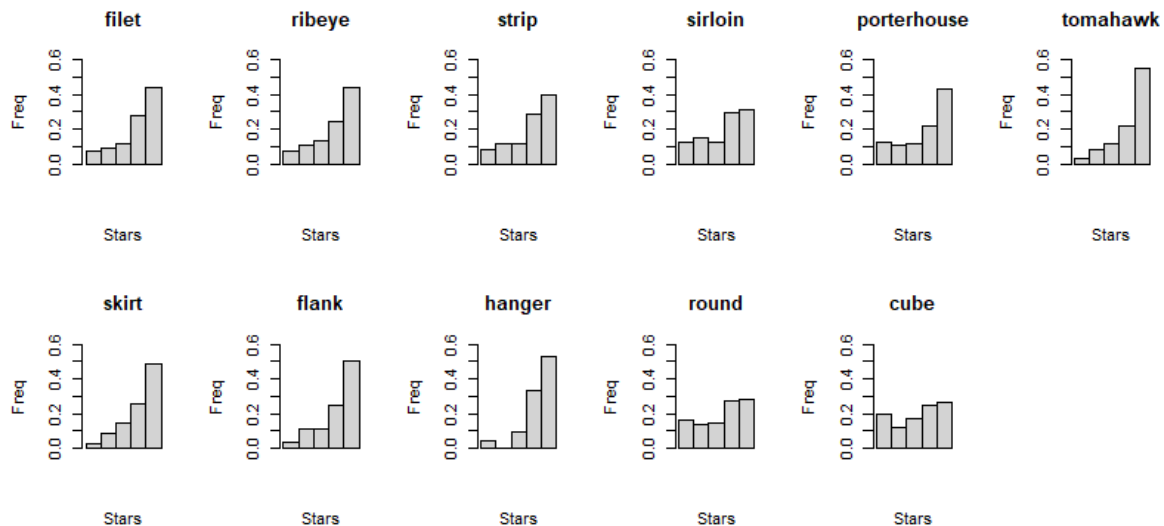
The `yelp.ipynb` in `code` folder is used to clean the data and create the word frequency table and the large word embedding table with original views.

After filtering and combination, the `steak_cleaned.csv` has 33629×6085 columns.

3.Insights about Steak Restaurants

3.1 Different Types of Steak

Firstly, let’s check the common types of steaks and how their ratings distribute. These steaks are also the ones that appear many times in the comments.



We found that tomahawk, skirt, hanger and flank steaks tends to obtain 5-star comments more easily. The portion of their 5-star comments is significantly over 45%.

However, customers seem to be more picky on sirloin, round and cube steak according to the data. The portion of their 5-star comments is roughly less than 30%.

3.2 Different Types of other food

todo

3.3 Different Non-food Items

todo

food, drink, wifi, parking, price...

words distribution in reviews of different stars

focus on certain district like Madison

compare great and awful restaurant from words of food type, etc

statistical test?

...

4.Actionable plan

4.1 Advice on opening a new steak restaurant

In the aspect of steaks:

- Focus on tomahawk, skirt, hanger and flank steaks at first and emphasize them on your menu.
- Filet, ribeye, strip and porterhouse steaks are not bad to consider.
- Make sirloin, round and cube steaks inconspicuous on your menu or avoid offering them.

In the aspect of other foods:

In the aspect of non-food items:

4.2 Advice on improving an existed steak restaurant

In the aspect of steaks:

- Try to improve tomahawk, skirt, hanger and flank steaks if one of them has brought your restaurant many low-star comments since the customers are not so picky about them.
- Advertise your sirloin, round and cube steaks if one of them has brought your restaurant high-star comments. It is very praiseworthy to have highly rated sirloin, round and cube steaks.

In the aspect of other foods:

In the aspect of non-food items:

5.Shiny App

link