

A black 8KG kettlebell is in the foreground on a black rubber gym floor. In the background, two people are visible in a gym setting. A large orange diagonal graphic is overlaid on the image.

How to improve your gym business?

Thurs Group 7
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Goal:



Explore gym business--- Give suggestions to gym owners to improve their business

1. Do explanatory data analysis: done in pre1
2. Suggestions wrt attributes
3. Suggestions wrt reviews



- 01 > Background
- 02 > Analysis of attributes
- 03 > Analysis of reviews
- 04 > Shiny app



Background



- Based on reviews from customers, business owners can evaluate the performance of their business and make corresponding improvement.
- However, the performance information is not so obvious. So, good models and exploratory data analysis are needed.
- A shiny app can be used to provide concise information about rank of the gym in the industry, and give the corresponding suggestions.

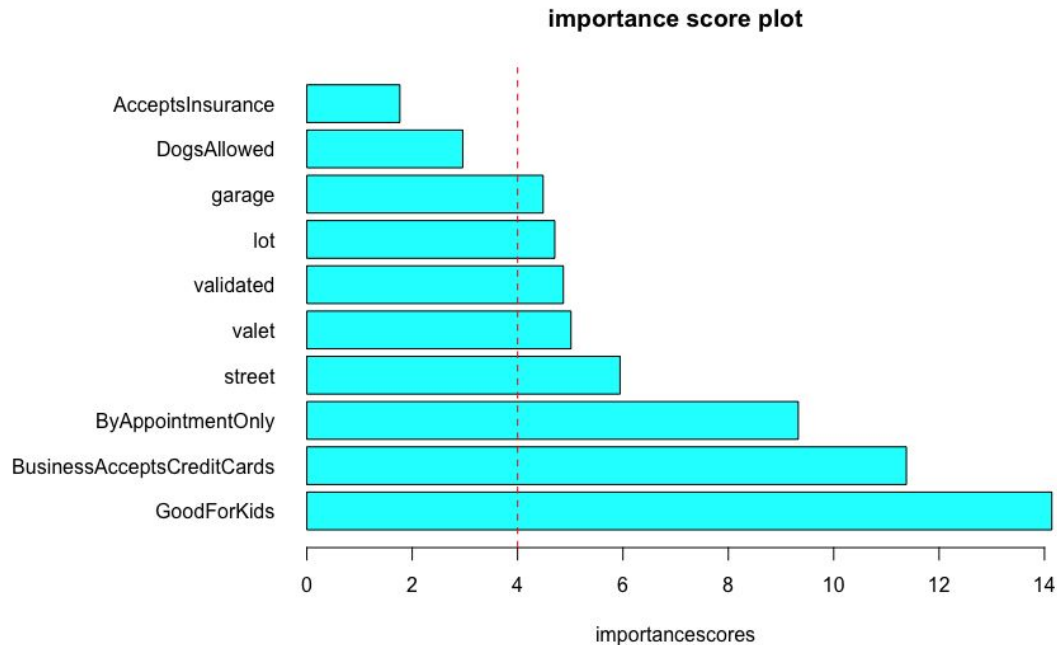
Analysis of attributes

- Calculate weighted stars for each business
- Convert the weighted stars into 5 classes for classification decision tree model
- Most attributes have high percentage of missing values
- Remove the least number of attributes that are uncorrelated with gym business
- Perform classification decision tree model on GUIDE

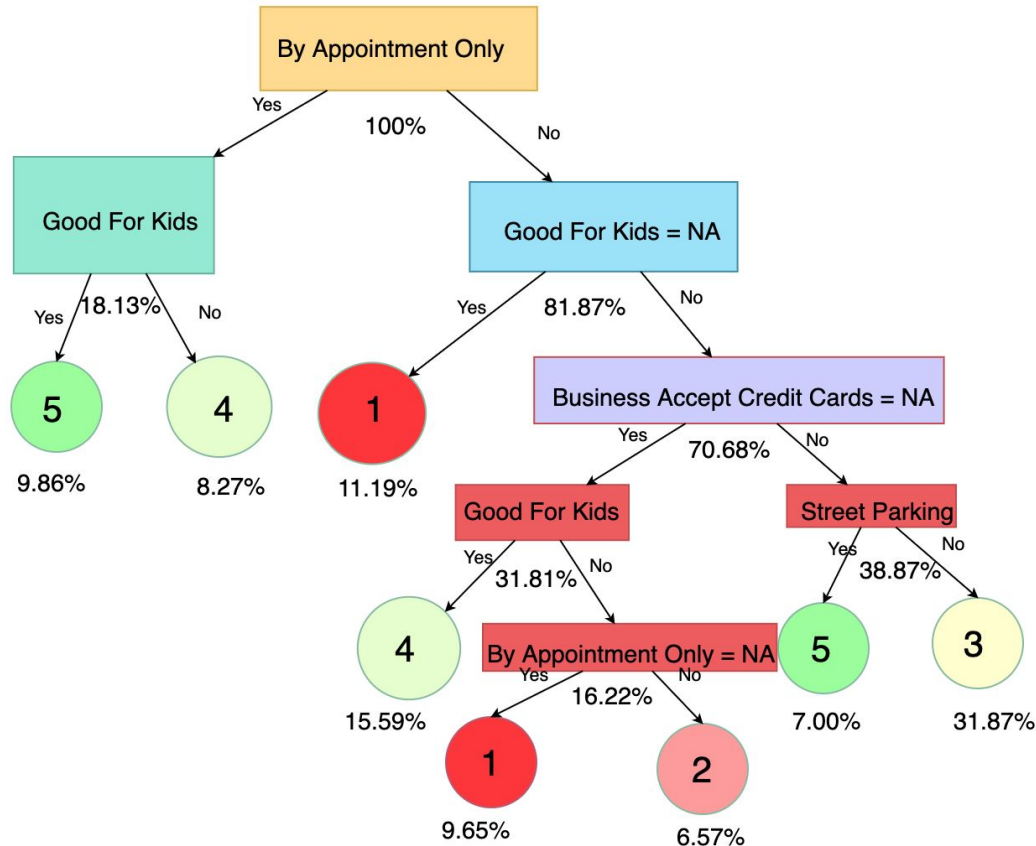


Analysis of attributes

- Importance scores from GUIDE classification decision tree model



Analysis of attributes

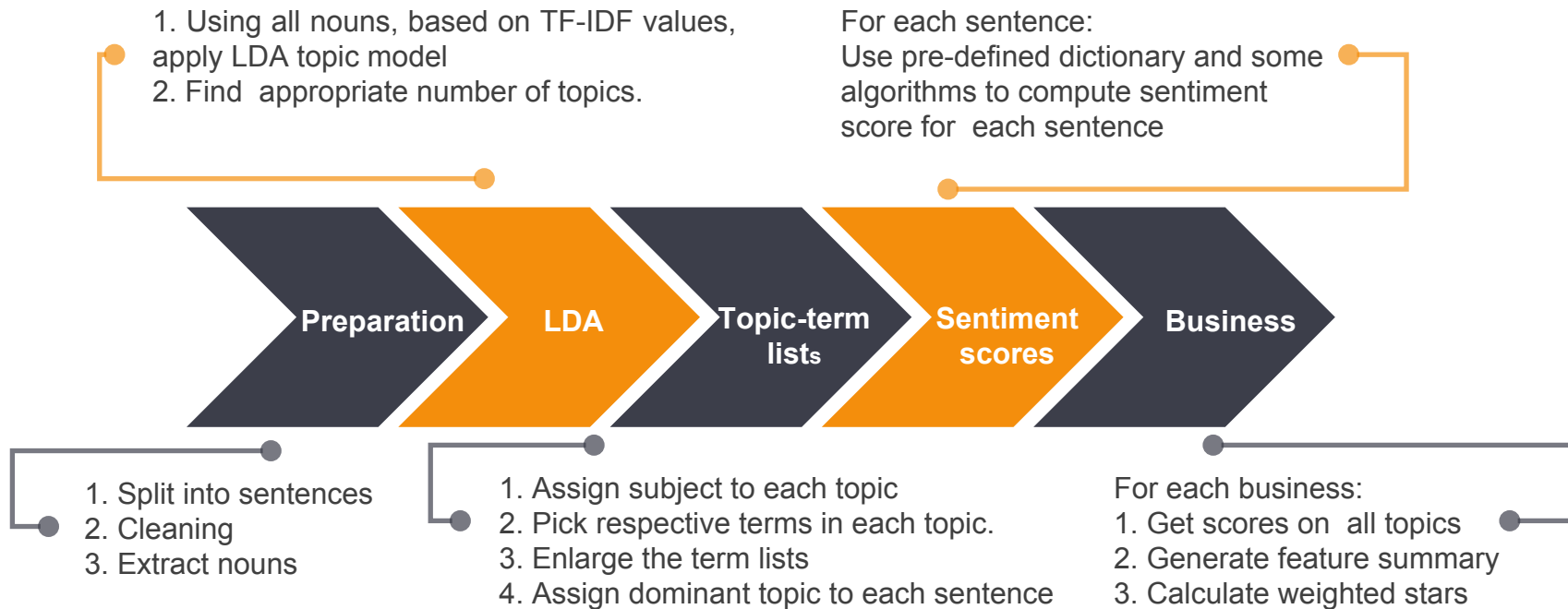


Classification Decision Tree Model

- Provide information about 'GoodForKids', 'ByAppointmentOnly' and 'BusinessAcceptCreditCards' on Yelp
- Better provide street parking
- Set places for kids playing
- If possible, provide appointment for premium customers for better service



Analysis of reviews



Shiny app



Improve gym business now !

Business id:

Note: Input the your gym business id.

Get suggestions!

How to use this app?

[Where is the gym in the business?](#)

[Suggestions wrt reviews](#)

[Suggestions wrt attributes](#)

This app is to give gym business owners suggestions on how to improve their ratings on yelp.

The design and suggestions mainly depend on reviews and attributes. Seven Main topics are talked by all the reviews. Their subject and examples are :

topic_1_Facilities: equipment, machine, weight, cardio, pool.

topic_2_Courses: class, training, session, yoga, course.

topic_3_Service_and_Accessories: service, locker, shower, desk, change.

topic_4_Membership_and_Price: membership, money ,contract, rate, bill.

topic_5_Trainer: trainer, instructor, coach, teacher, advisor.

topic_6_Time: time, day, month, morning, night.

topic_7_Environment: music, house, environment, design, smell.

The tab Where is your business gives the position of your own business, how many business you have beat in the whole business on each topic.

The tab Suggestions wrt reviews gives your the summary of all your reviews, and give quantative suggestions on how the improvement of score on each topic influence your ratings.

The tab Suggestions wrt attributes gives suggestions of improving ratings wrt attributes

Shiny app



Improve gym business now !

Business id:

154169

Note: Input the your gym business id.

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[How to use this app?](#)

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On topic_1_Facilities, you have beat 21.74 % businesses.

On topic_2_Courses, you have beat 8.06 % businesses.

On topic_3_Service_and_Accessories, you have beat 12.14 % businesses.

On topic_4_Membership_and_Price, you have beat 3.13 % businesses.

On topic_5_Trainer, you have beat 17.18 % businesses.

On topic_6_Time, you have beat 24.34 % businesses.

On topic_7_Environment, you have beat 98.41 % businesses.

Shiny app



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Search:

Suggestions wrt reviews:

	topic	reviews	mention_times	positive	negative	neutral	score	Improvement
1	Facilities	8	17	0	2	15	-0.03529	0.8225
2	Courses	8	4	0	1	3	-0.05	1.0843
3	Service&Accessories	8	11	0	4	7	-0.05455	0.7164
4	Membership&Price	8	20	1	6	13	-0.1	1.196
5	Trainers	8	3	0	0	3	0	0.6984
6	Time	8	6	0	2	4	-0.03333	0.8813
7	Environment	8	1	1	0	0	1	0.6448

Showing 1 to 7 of 7 entries

Note of Improvement: This is the increase amount of weighted ratings if score of this topic increases by 1.

Shiny app



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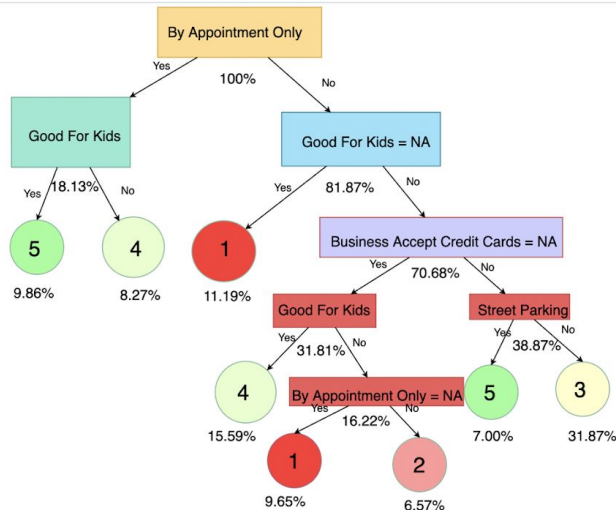
Get suggestions!

[How to use this app?](#)

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[Suggestions wrt reviews](#)

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The figure provides information about 'GoodForKids', 'ByAppointmentOnly' and 'BusinessAcceptCreditCards' on Yelp.

Provide appointment for premium customers for better service.

It will better if street parking is provided.

Set places for kids playing!



Thank you !

Q & A