

Restaurant-Customer Ratings Database

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Project Group 7



Project Overview

- Online ratings and reviews is responsible for 80% of customer restaurant selection.
- Most customers prefer a glance at the overall ratings of a restaurant than read through the reviews.
- Keeping this in mind, various restaurant datasets were analyzed according to the customer ratings and cuisine preferences in Mexico.
- The Recommender database will show :
 - The top restaurants based on customer ratings.
 - find the value for money restaurants in various parts of Mexico.

Project Overview

The purpose of this project is to:

- Provide restaurant details.
- Suggest best restaurant to the customers.
- Provide Economic status of restaurants.
- Making the data available to customers.
- Determine customer satisfaction and requirement.

To conclude, the database will help customers find restaurants based on their cuisine preferences and restaurant ratings.

Status of each phase

Database Initial Study	:Completed
Database Design	:Completed
Implementation and Loading	:In Progress
Testing & Evaluation	:To Be Completed

Original milestone vs What has been done

PHASES	PROPOSED DATE	ACHIEVED DATE
Database Initial Study	Apr 16, 2021	Apr 16, 2021
Database Design	Apr 22, 2021	Apr 22, 2021
Implementation and Loading	May 2 ,2021	In progress
Testing & Evaluation	May 10, 2021	Yet to start

Database Initial Study

Selecting the dataset:

- We have used three main datasets (Restaurant customer, Restaurant Name and Restaurant ratings).
- The datasets describes the restaurants, their customers, and the ratings they give. The datasets include both numerical and categorical features.
- Restaurant Customer data has 12 attributes for 138 customers with each customer having a unique userID.
- Restaurant data has 19 attributes for 130 restaurants with each restaurant having a unique placeID.
- Restaurant Ratings data has 1161 customer ratings that customers (userID) provided for various restaurants (placeID).

Database Initial Study

The restaurant dataset details include:

- Cuisine Type
- Working Hours
- Payment Method
- Parking Facility
- Prominent Features
- Rating

The Customer dataset details include:

- User Profile
- Cuisine Preference
- Payment Preference

user_profile

Schema	Details	Preview	
Field name	Type	Mode	Policy tags
userID	STRING	NULLABLE	
smoker	STRING	NULLABLE	
drink_level	STRING	NULLABLE	
budget	STRING	NULLABLE	
ambience	STRING	NULLABLE	
transport	STRING	NULLABLE	
marital_status	STRING	NULLABLE	
dress_preference	STRING	NULLABLE	
birth_year	STRING	NULLABLE	
activity	STRING	NULLABLE	

Edit schema

Database Initial Study

Not every customer spends time to read through the reviews, but prefer a glance at the overall ratings of the restaurant. So, we have taken ratings from the customers based on the below attributes and provide an overall rating for the restaurant:

- Cost
- Food
- Service
- Parking
- Waiting Time
- Overall Rating

Database Initial Study

- Data Cleaning was done on different tables to minimize irrelevant and incomplete data which makes it suitable for easy access and analysis.

restaurant_data

QUERY TABLE

SHARE TABLE

COPY TABLE

DELETE TABLE

EXPORT

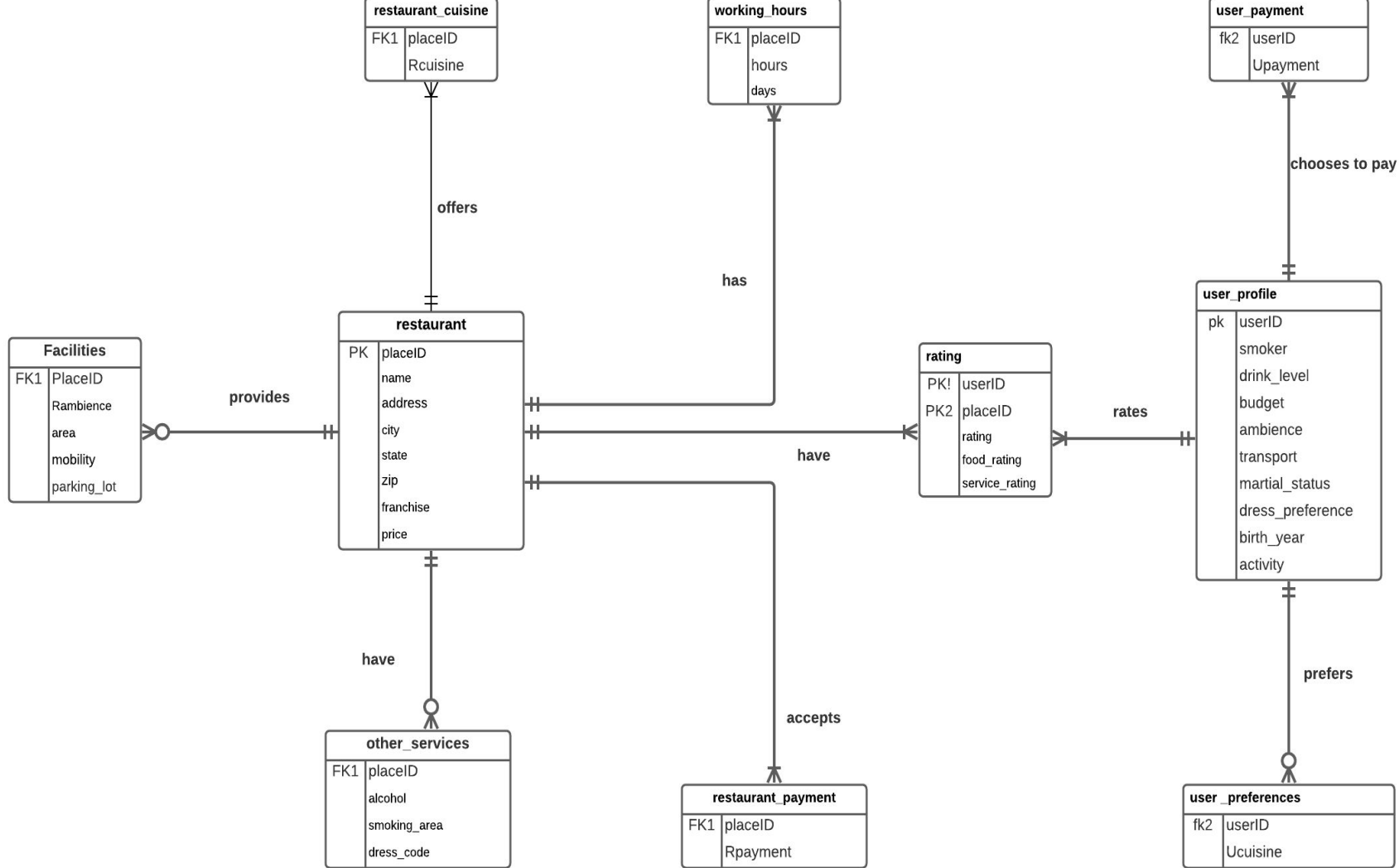
Schema Details Preview

Row	placeID	latitude	longitude	the_geom_meter	name	address	city	state	country	fax	zip	alcohol
1	132626	23.7375834	-99.1351318	0101000020957F0000AA7883ADD88457C1FA651328BA464941	la perica hamburguesa	avenida salvador montiel	Jiutepec	tamaulipas	?	?	78280	No_Alcohol_Se
2	132626	23.7375834	-99.1351318	0101000020957F0000AA7883ADD88457C1FA651328BA464941	la perica hamburguesa	calle emilio portes gil	s.l.p	tamaulipas	?	?	78290	No_Alcohol_Se
3	132626	23.7375834	-99.1351318	0101000020957F0000AA7883ADD88457C1FA651328BA464941	la perica hamburguesa	Calle Mezquite Fracc Framboyanes	s.l.p.	tamaulipas	?	?	78310	No_Alcohol_Se
4	132626	23.7375834	-99.1351318	0101000020957F0000AA7883ADD88457C1FA651328BA464941	la perica hamburguesa	Camino a Simon Diaz 155 Centro	san luis potos	tamaulipas	?	?	78349	No_Alcohol_Se
5	132626	23.7375834	-99.1351318	0101000020957F0000AA7883ADD88457C1FA651328BA464941	la perica hamburguesa	carr. mexico	San Luis Potosi	tamaulipas	?	?	78433	No_Alcohol_Se
6	132626	23.7375834	-99.1351318	0101000020957F0000AA7883ADD88457C1FA651328BA464941	la perica hamburguesa	cd. mier	san luis potosi	tamaulipas	?	?	78740	No_Alcohol_Se
7	132885	22.1795169	-100.9584358	0101000020957F0000B1DA6F2D504458C112A26CA45B9C4B41	Hamburguesas saul	tampico	San Luis Potosi	Tamaulipas	mexico	?	78430	No_Alcohol_Se
8	132885	22.1795169	-100.9584358	0101000020957F0000B1DA6F2D504458C112A26CA45B9C4B41	Hamburguesas saul	Tangamanga 7 Tangamanga	san luis potosi	mexico	mexico	?	78433	No_Alcohol_Se
9	132885	22.1795169	-100.9584358	0101000020957F0000B1DA6F2D504458C112A26CA45B9C4B41	Hamburguesas saul	Universidad 169	slp	mexico	mexico	?	78740	No_Alcohol_Se
10	132667	23.7526973	-99.1633594	0101000020957F00005D67BCDDED8157C1222A2DC8D84D4941	little pizza Emilio Portes Gil	av. seminario	Cd. Victoria	mexico	?	?	62790	No_Alcohol_Se
11	132667	23.7526973	-99.1633594	0101000020957F00005D67BCDDED8157C1222A2DC8D84D4941	little pizza Emilio Portes Gil	Av. V. Carranza	Ciudad Victoria	S.L.P.	?	?	64000	No_Alcohol_Se
12	132667	23.7526973	-99.1633594	0101000020957F00005D67BCDDED8157C1222A2DC8D84D4941	little pizza Emilio Portes Gil	avenida hivno nacional	Cuernavaca	tamaulipas	?	?	62790	No_Alcohol_Se


- Data normalization was done on our dataset to improve data integrity, data uniformity and minimize data redundancy.

placeID	latitud	longitud	the_ge	name	address	city	state	country	fax	zip	alcohol	smoking	dress_code	Rcuisine	parking_lot	hours	days	Rpayment
132955	22.14762	-101.01	010100002	emilianos venustian	san luis p	mexico	?	?	?	?	Wine-Beer	none	informal	Bar_Pub_Brewery	none	00:00-23 Sat;		VISA,Carte_Blanche,cash,bank_debit_cards,MasterCard-Eurocard
132560	23.7523	-99.1669	010100002	puesto de frente al t	victoria	tamaulipa	mexico	?	?	?	No_Alcohol_Served	permitted	informal	Regional	public	00:00-00 Sat;		cash
132560	23.7523	-99.1669	010100002	puesto de frente al t	victoria	tamaulipa	mexico	?	?	?	No_Alcohol_Served	permitted	informal	Regional	public	00:00-00 Sun;		cash
132560	23.7523	-99.1669	010100002	puesto de frente al t	victoria	tamaulipa	mexico	?	?	?	No_Alcohol_Served	permitted	informal	Regional	public	08:00-12 Mon;Tue;		cash
135018	18.8598	-99.2222	010100002	El Oceano Libramien	Cuernavaca	Morelos	Mexico	?	?	?	Full_Bar	permitted	informal	Mexican	yes	00:00-00 Sat;		VISA,cash,bank_debit_cards,MasterCard-Eurocard
132626	23.73758	-99.1351	010100002	la perica t	victoria	tamaulipa	?	?	?	?	No_Alcohol_Served	none	informal	Italian	yes	00:00-23 Sat;		cash,American_Express

Database Design



Implementation

 RUN

 SAVE ▾

 SCHEDULE ▾

 MORE ▾

```
6  # Creating Restaurant table consisting basic details
7  create or replace table termproject225.restaurant as (
8  select distinct placeID, name, address,city,state,zip,franchise,price
9  from `data225-spring-2021.termproject225.restaurant_data`
10 )
11 ;
12 # Creating a table based on Facilities available at Restaurants
13 create or replace table termproject225.facilities as (
14 select distinct placeID, Rambience, area, accessibility as mobility, parking_lot
15 from `data225-spring-2021.termproject225.restaurant_data`
16 )
17 ;
18
19 # Creating a table based on Other Services available at Restaurants
20 create or replace table termproject225.other_services as (
21 select distinct placeID, alcohol,smoking_area,dress_code
22 from `data225-spring-2021.termproject225.restaurant_data`
23 )
24 ;
25
26 # Creating a table based on Other Services available at Restaurants
27 create or replace table termproject225.restautant_cuisine as (
28 select distinct placeID, R.Rcuisine
29 from `data225-spring-2021.termproject225.restaurant_data` R
30 )
```

What is still outstanding?

We have successfully achieved all our milestones, currently we are working on the implementation and loading. After finishing that we are planning to work on the final stage i.e Testing and Evaluation.

Challenges faced during Implementation and loading

- While uploading the dataset into the database we are not able to change the data mode manually in BigQuery.
- Still working on this problem.

Queries ??

Thank you