Database Project

(Power BI Track)

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Telco Customer Churn

Focused customer retention programs

About Dataset

Context

Predict behavior to retain customers. You can analyze all relevant customer data and develop focused customer retention programs.

Content

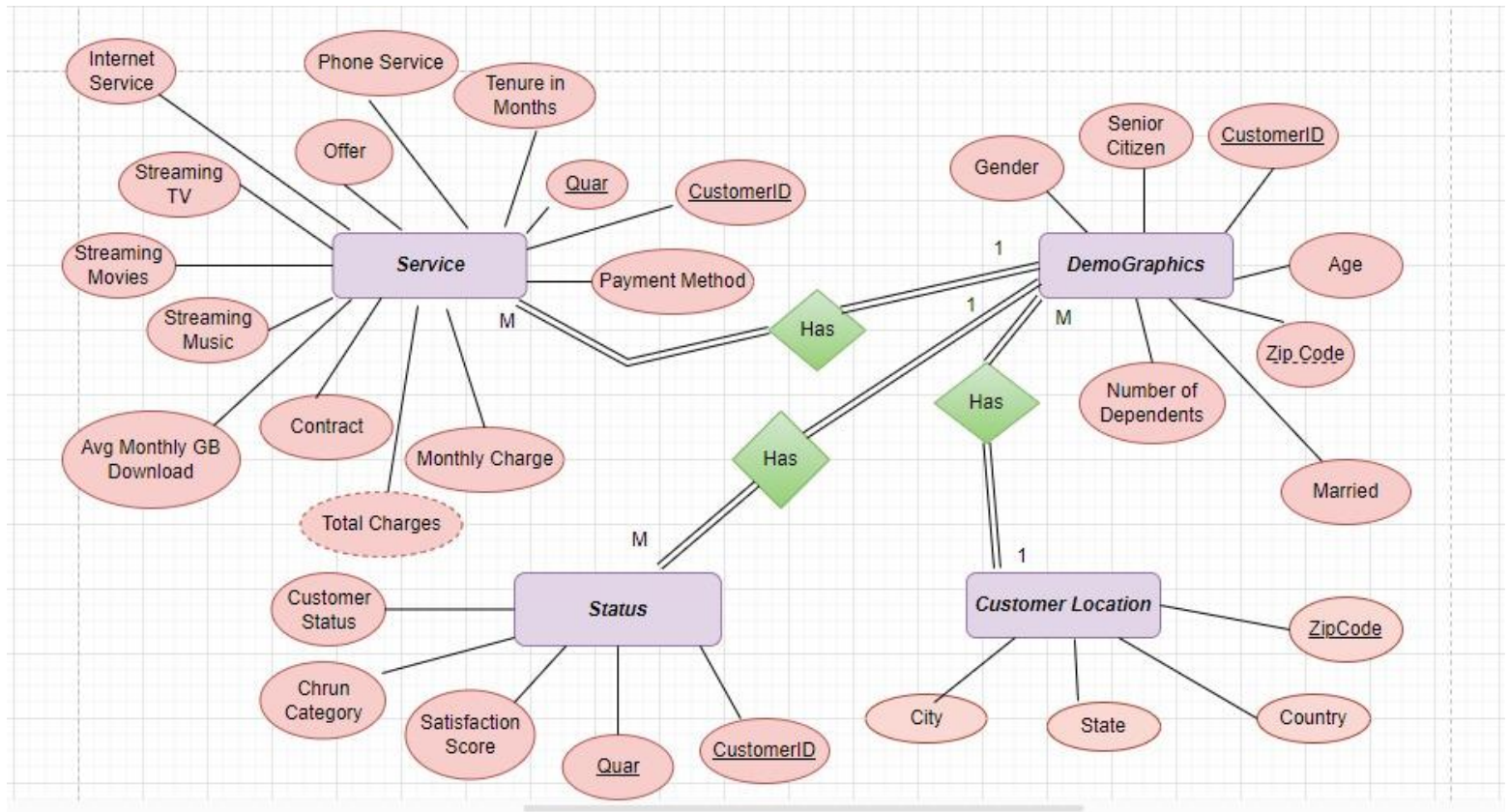Each row represents a customer, each column contains the customer's attributes described in the column Metadata.

The data set includes information about:

- Customers who left within the last month – the column is called Churn
- Services that each customer has signed up for – phone, multiple lines, internet, online security, online backup, device protection, tech support, and streaming TV and movies
- Customer account information – how long they've been a customer, contract, payment method, paperless billing, monthly charges, and total charges
- Demographic info about customers – gender, age range, and if they have partners and dependents

Inspiration

To explore this type of model and learn more about the subject.

ERD of the database

Mapping

Demographics

CustomerID	Gender	Age	Senior_Citizen	Married	Number_of_Dependents	Zip_code

Location

Zip_code	Country	State	City

Status

CustomerID	Quarter	Satisfaction_Score	Customer_Status	Churn_Category

Service

CustomerID	Quarter	Tenure_in_Months	offer	phone_service	internet_service	streaming_TV	streaming_movies	streaming_music	avg_monthly_GB_download	contract	payment_method	monthly_charges	Total_Charges

Database Contents

The database contains 4 tables:

- **Demographics**
- **Location**
- **Services**
- **Status**

1. Demographics

CustomerID: A unique ID that identifies each customer.

Count: A value used in reporting/dashboarding, to sum up the number of customers in a filtered set.

Gender: The customer's gender: Male, Female

Age: The customer's current age, in years, at the time the fiscal quarter ended.

Senior Citizen: Indicates if the customer is 65 or older: Yes, No

Married: Indicates if the customer is married: Yes, No

Dependents: Indicates if the customer lives with any dependents: Yes, No. Dependents could be children, parents, grandparents, etc.

Number of Dependents: Indicates the number of dependents that live with the customer.

2. Location

CustomerID: A unique ID that identifies each customer.

Count: A value used in reporting/dashboarding, to sum up the number of customers in a filtered set.

Country: The country of the customer's primary residence.

State: The state of the customer's primary residence.

City: The city of the customer's primary residence.

Zip Code: The zip code of the customer's primary residence.

3. Services

CustomerID: A unique ID that identifies each customer.

Quarter: The fiscal quarter from which the data has been derived (e.g. Q3).

Tenure in Months: Indicates the total months that the customer has been with the company by the end of the quarter specified above.

Offer: Identifies the last marketing offer that the customer accepted, if applicable. Values include None, Offer A, Offer B, Offer C, Offer D, and Offer E.

Phone Service: Indicates if the customer subscribes to home phone service with the company: Yes, No

Avg Monthly Long Distance Charges: Indicates the customer's average long-distance charges, calculated to the end of the quarter specified above.

Internet Service: Indicates if the customer subscribes to Internet service with the company: No, DSL, Fiber Optic, Cable.

Avg Monthly GB Download: Indicates the customer's average download volume in gigabytes, calculated to the end of the quarter specified above.

Streaming TV: Indicates if the customer uses their Internet service to stream television programming from a third party provider: Yes, No. The company does not charge an additional fee for this service.

Streaming Movies: Indicates if the customer uses their Internet service to stream movies from a third-party provider: Yes, No. The company does not charge an additional fee for this service.

Streaming Music: Indicates if the customer uses their Internet service to stream music from a third-party provider: Yes, No. The company does not charge an additional fee for this service.

Contract: Indicates the customer's current contract type: Month-to-Month, One Year, Two Year.

Payment Method: Indicates how the customer pays their bill: Bank Withdrawal, Credit Card, Mailed Check

Monthly Charge: Indicates the customer's current total monthly charge for all their services from the company.

Total Charges: Indicates the customer's total charges, calculated to the end of the quarter specified above.

4. Status

CustomerID: A unique ID that identifies each customer.

Quarter: The fiscal quarter from which the data has been derived (e.g. Q3).

Satisfaction Score: A customer's overall satisfaction rating of the company from 1 (Very Unsatisfied) to 5 (Very Satisfied).

Satisfaction Score Label: Indicates the text version of the score (1-5) as a text string.

Customer Status: Indicates the status of the customer at the end of the quarter: Churned, Stayed, or Joined.

Questions Answered with Queries

1. Is there a relationship between Gender and Churn Customers?
2. Which MartialStatus has the highest Churn?
3. Is there a relation between Age and Churned?
4. Which Gender has more consumption?
5. Which city has higher tenure and consumption?
6. Does the Customer with the Highest SatisfactionScore have high consumption?
7. What is the average tenure of customers based on their contract type?
8. How does the average monthly charge vary among different payment methods?
9. Which quarter experienced the highest rate churn rate?
10. Is there a relationship between the number of dependents (or age) and churn?
11. How does the churn rate differ among different age groups?
12. What is the distribution of satisfaction scores across different contract types?
13. Is there a difference in average monthly charges between senior citizens and non-senior citizens?
14. Which state has the highest churn rate?
15. Which state has the highest churn rate?
16. What is the average tenure for customers who use streaming TV versus those who don't?
17. How does the churn rate vary among different internet service types?
18. What is the average monthly download volume for each internet service type?
19. How does the churn rate change based on the type of offers provided?
20. Which payment method is most preferred among customers with high satisfaction scores?
21. Is there a difference in tenure between customers who churned and those who stayed?
22. How does the churn rate & churned category differ on age?
23. What is the average total charge for customers in different cities?
24. Do customers with a higher number of dependents have higher satisfaction scores?
25. What is the percentage distribution of churn categories among churned customers?
26. Is there a correlation between satisfaction scores and churn categories?