



Total  
Customers

954

Churn Rate

23%

Age

☐ ☐ ☐ ☐

☐ ☐ ☐ ☐

☐ ☐ ☐

ServicesOpted

☐ ☐ ☐ ☐ ☐ ☐

FrequentFlyer

☐ ☐

☐

Annual Income

☐

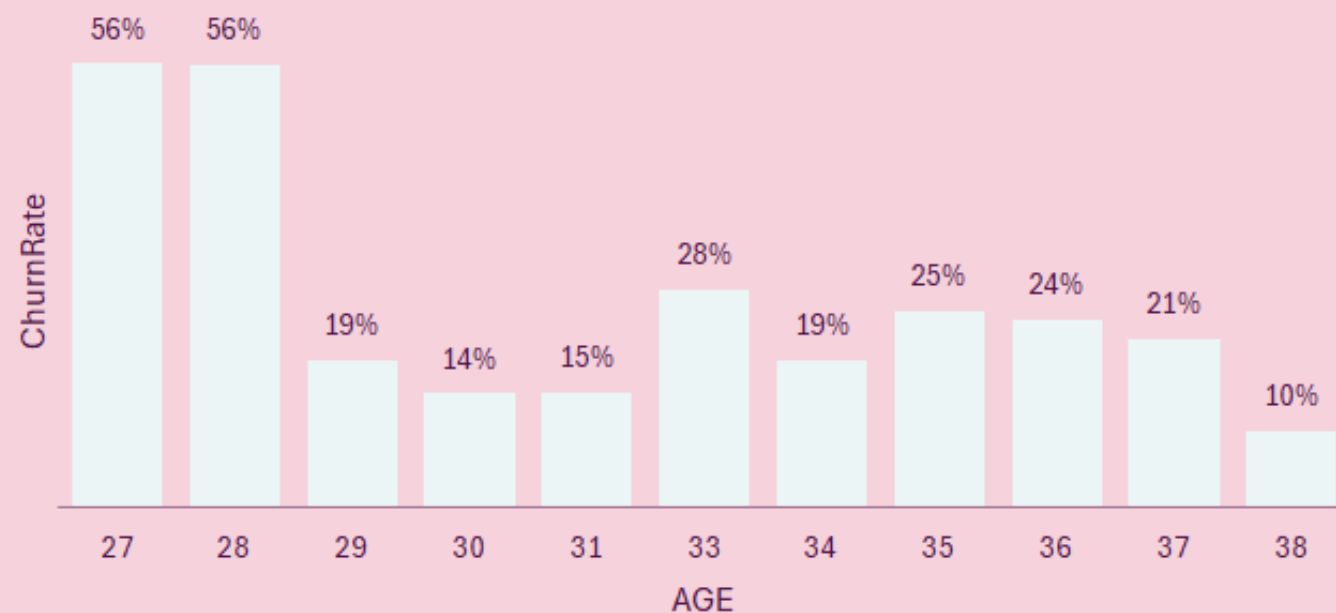
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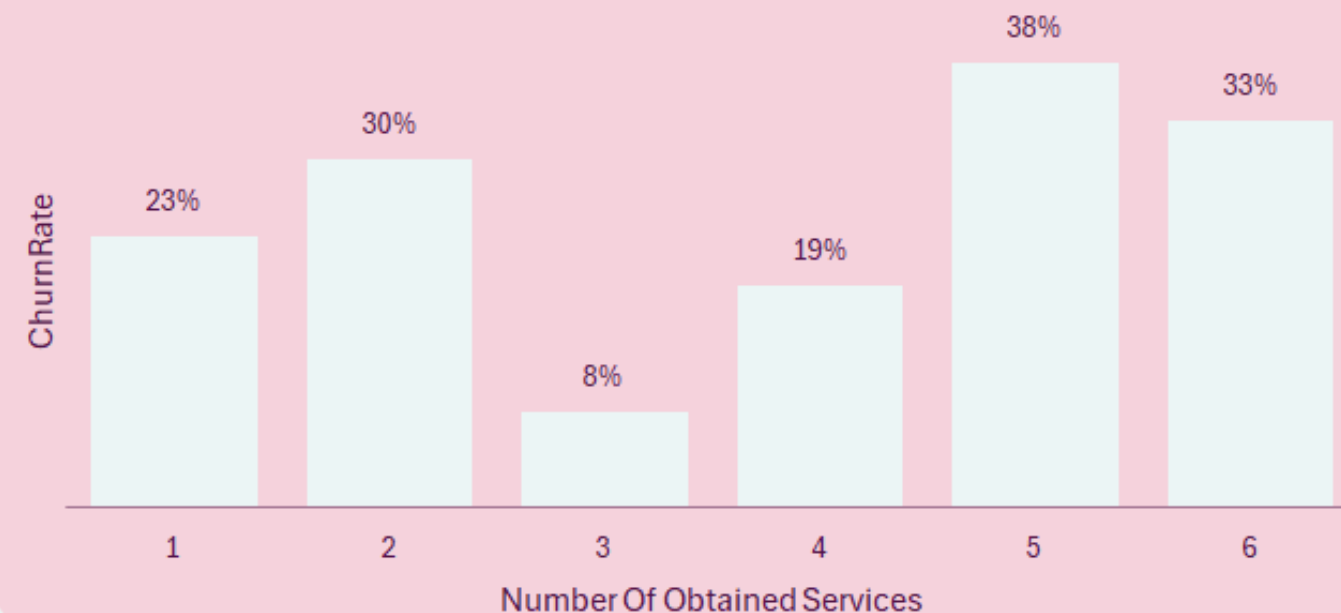
SyncedToSocial

☐ ☐

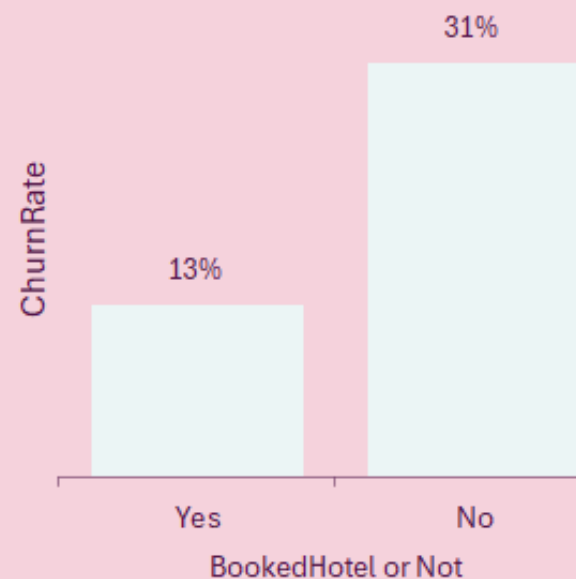
Churn Rate By Customers Age



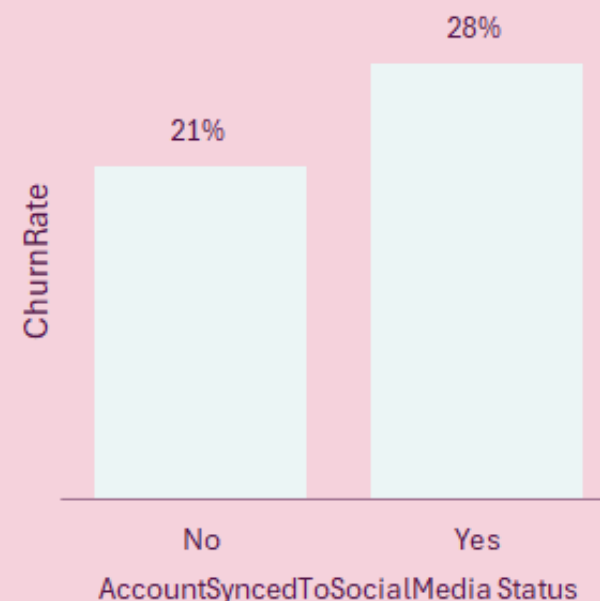
Churn Rate By Obtained Services



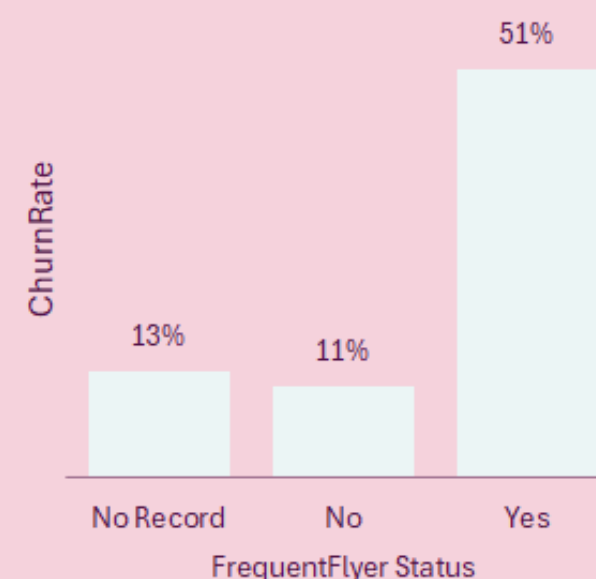
Churn Rate By  
Hotel Reservation



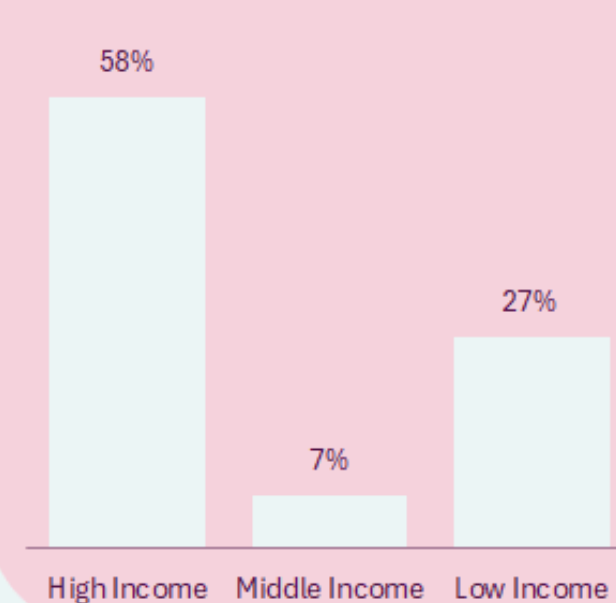
Churn Rate By  
Synced To Social Media



Churn Rate By  
Frequent Flyer Status



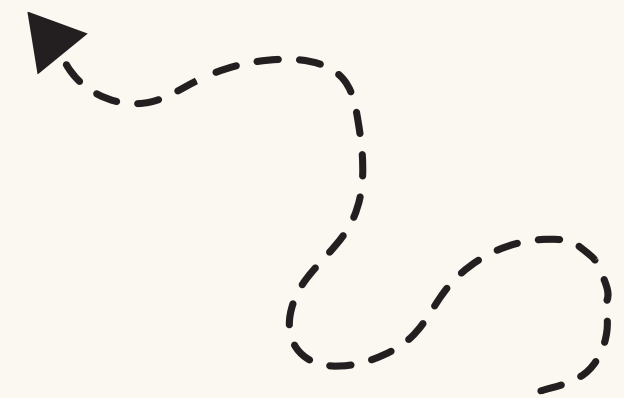
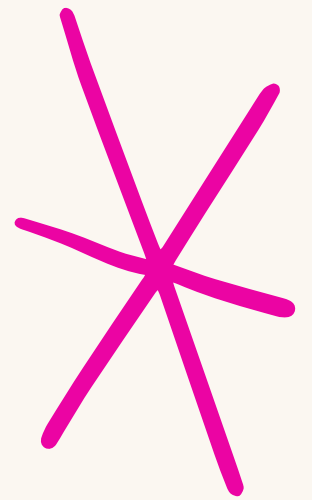
Churn Rate By  
Income classification



By Kareem Shaaban

# Tours & Travels

TASK 8 WITH COGNORISE INFOTECH





# **Introduction**

**This project explores customer churn in the travel and tourism industry using a Kaggle dataset to analyze factors such as age, income, frequent flyer status, social media engagement, and service utilization**



# Cleaning Process



## Data Loading and Initial Preparation

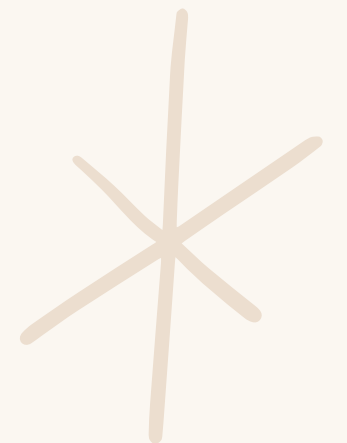
- Begin by loading the dataset into Power Query.
- Remove any blank rows to ensure data consistency.
- Adjust data types to match the expected format for each column.
- Replace specific values as needed for standardization.

## Duplicate Row Consideration

“During this process, I noticed the absence of a unique identifier for each row. Deleting duplicates would result in a 50% data loss, as many customers share similar attributes across categories. Given this, I decided to retain the duplicates to preserve the dataset's integrity”

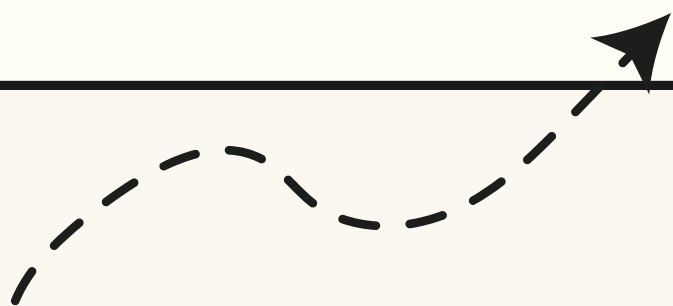
## Export to Excel

- Load the cleaned data into Excel.
- Calculate the churn rate for each customer category.





Age	FrequentFlyer	AnnualIncomeClass	ServicesOpted	AccountSyncedToSocialMedia	BookedHotelOrNot	Target
34	No	Middle Income	6	No	Yes	Remain
34	Yes	Low Income	5	Yes	No	Churn
37	No	Middle Income	3	Yes	No	Remain
30	No	Middle Income	2	No	No	Remain
30	No	Low Income	1	No	No	Remain
27	Yes	High Income	1	No	Yes	Churn
34	No	Middle Income	4	Yes	Yes	Remain
34	No	Low Income	2	Yes	No	Churn
30	No	Low Income	3	No	Yes	Remain
36	Yes	High Income	1	No	No	Churn
34	No	Low Income	1	Yes	Yes	Remain
28	No	Middle Income	2	No	No	Churn
35	No Record	Middle Income	1	Yes	Yes	Remain
34	Yes	Low Income	4	No	No	Remain
34	No	Middle Income	5	No	No	Remain
37	Yes	Low Income	6	No	Yes	Remain
30	No	Low Income	1	Yes	Yes	Remain
30	Yes	High Income	1	Yes	No	Remain
31	No	Middle Income	1	No	Yes	Remain
37	No	Low Income	2	Yes	No	Churn

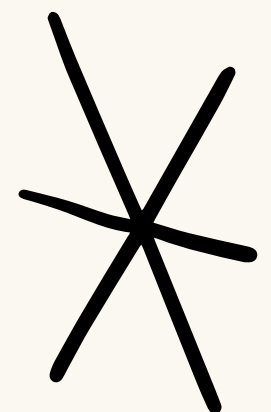


Age	Churn Rate	Formula
27	56%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E7,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E7),0%)
28	56%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E8,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E8),0%)
29	19%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E9,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E9),0%)
30	14%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E10,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E10),0%)
31	15%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E11,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E11),0%)
33	28%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E12,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E12),0%)
34	19%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E13,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E13),0%)
35	25%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E14,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E14),0%)
36	24%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E15,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E15),0%)
37	21%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E16,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E16),0%)
38	10%	=IFERROR(GETPIVOTDATA("Age",\$B\$6,"Age",E17,"Target","Churn")/GETPIVOTDATA("Age",\$B\$6,"Age",E17),0%)



# Analysis

- How does age relate to customer churn status (i.e., likelihood to churn vs. remain)?
- What is the relationship between frequent flyer status and customer churn?
- How does annual income class correlate with customer churn status?
- What is the impact of different services opted for on customer churn status?
- How does having an account synced to social media influence customer churn?
- Does booking a hotel affect the likelihood of customer churn?
- What is the total count of customers who have churned?





# FINDINGS



## Overall Churn Rate:

- Out of 954 total customers, the overall churn rate is 23%.

## Churn Rate by Age:

- Churn rates are high among customers aged 27 and 28 (56% each).
- Customers aged between 29 and 32 show relatively low churn rates, especially at age 30 (only 14%).
- Churn rates increase slightly at age 33 (28%) and gradually decrease for older age groups, reaching a low of 10% at age 38.

## Churn Rate by Obtained Services:

- Customers who have only one service have a churn rate of 23%.
- The churn rate drops significantly to 8% for those with two services but then increases again with more services.
- The highest churn rate (38%) is seen among customers who have obtained five services, indicating a possible trend where having more services does not necessarily improve retention.



# FINDINGS

## Churn Rate by Hotel Reservation:

- Customers who have booked a hotel have a churn rate of 13%, while those who haven't booked a hotel show a higher churn rate of 31%.
- This suggests that hotel bookings could be a factor in reducing churn.

## Churn Rate by Social Media Sync:

- Customers who have synced their accounts to social media have a higher churn rate (28%) compared to those who have not synced (21%).
- Social media syncing might not be effective in reducing churn.



# FINDINGS

## Churn Rate by Frequent Flyer Status:

- Customers without a frequent flyer status have a low churn rate (11%).
- Customers marked as frequent flyers have a significantly higher churn rate of 51%, suggesting that frequent flyer status alone may not be a strong retention factor.

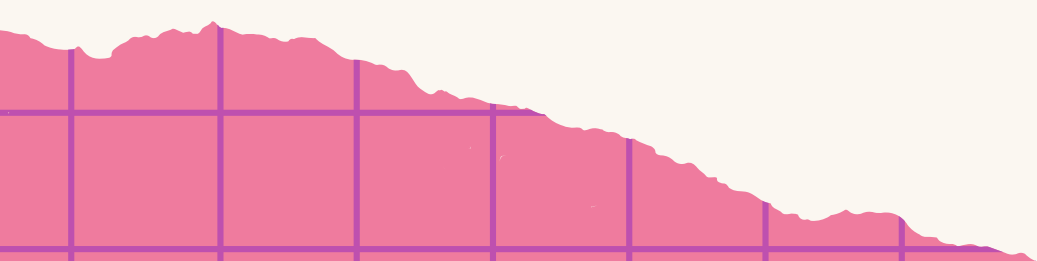
## Churn Rate by Income Classification:

- High-income customers show the highest churn rate at 58%.
- Middle-income customers have the lowest churn rate at 7%.
- Low-income customers have a moderate churn rate of 27%.



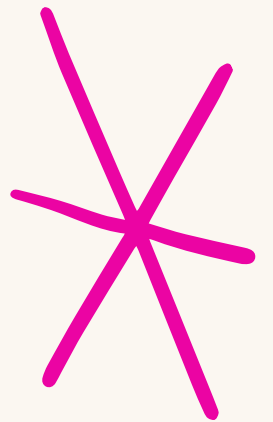
# SUMMARY

This project analyzes customer churn in the travel and tourism industry. Findings indicate that younger customers, high-income clients, and frequent flyers have higher churn rates, suggesting these groups need targeted retention efforts. Customers booking hotels show lower churn, while those opting for more services tend to leave at higher rates. These insights can guide strategies to improve customer retention by focusing on specific high-risk segments.





# THANK YOU!



Presented By Kareem Shaaban