1. Marketing Campaigns Case Study

Personalized customer emails based off marketing analytics is a winning formula for many digital companies, and this is exactly the initiative that the leadership team at DVD Rental Co has decided to tackle!

We have been asked to support the customer analytics team at DVD Rental Co who have been tasked with generating the necessary data points required to populate specific parts of this first-ever customer email campaign.

Throughout this marketing case study we will cover many SQL data manipulation and analysis techniques. The aim is to further extend your SQL knowledge base and also expose you to some scenarios where you can apply some neat tricks that I've picked up over the years!

2. Key Business Requirements

The marketing team have shared with us a draft of the email they wish to send to their customers.

There is a ton going on with the email template - but see if you can pick out exactly which data points we will need to generate in the dummy email sample below!

2.1. Email Template

DVD RENTAL CO

Personalized recommendations from our very own team of film afficionados!

TRAVEL

You've watched 10 Travel films, that's 4 more than the DVD Rental Co average and puts you in the top 10% of Travel Gurus!

Your expertly chosen recommendations:
[Film #1 title goes here]
[Film #2 title goes here]
[Film #3 title goes here]

SCI-FI

You've watched 6 Sci-Fi films, making up 25% of your entire viewing history!

Your hand-picked recommendations:
[Film #1 title goes here]
[Film #2 title goes here]
[Film #3 title goes here]

RUFUS PAWS

You've watched 5 films featuring Rufus Paws! Here are some other films Rufus stars in that might interest you!

[Film #1 title goes here]
[Film #2 title goes here]
[Film #3 title goes here]

2.2. Requirement #1

Top 2 Categories

For each customer, we need to identify the top 2 categories for each customer based off their past rental history. These top categories will drive marketing creative images as seen in the travel and sci-fi examples in the draft email.
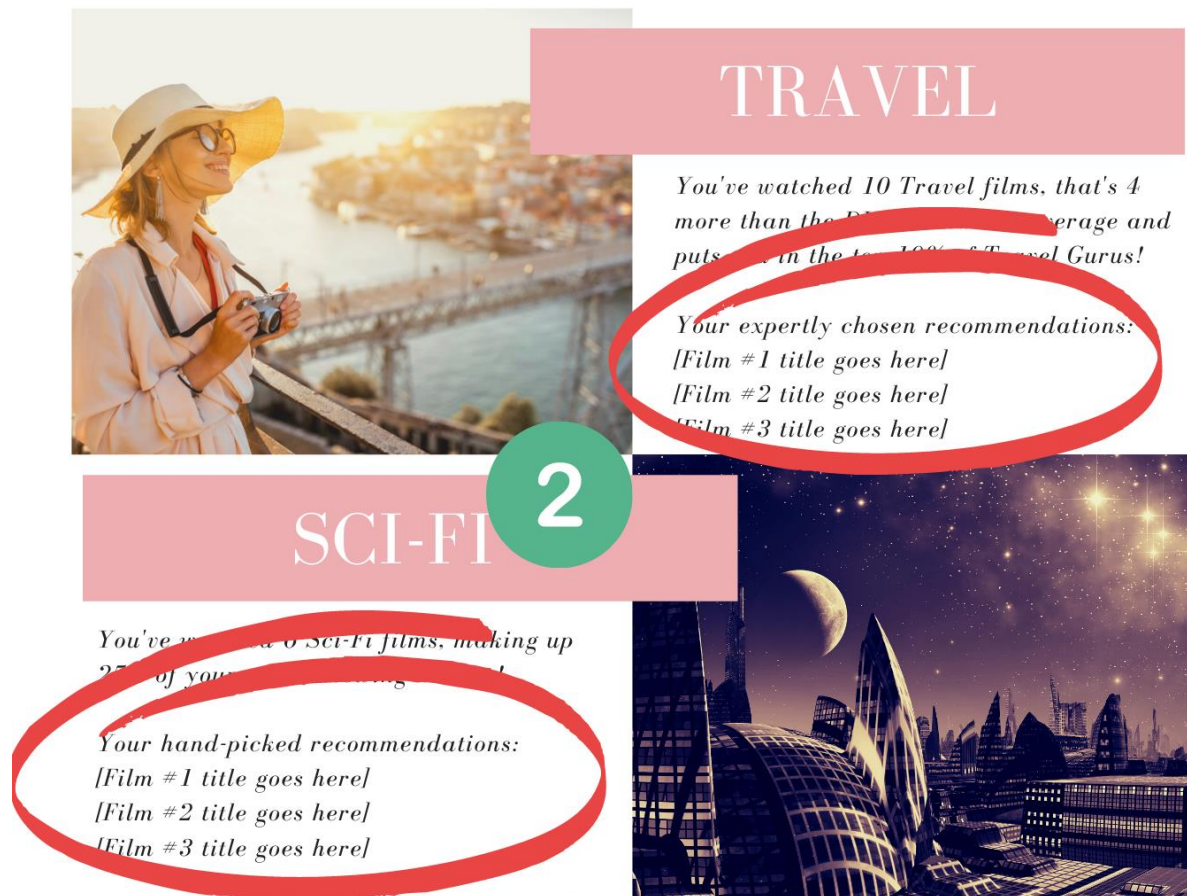

2.3. Requirement #2

Category Film Recommendations

The marketing team has also requested for the 3 most popular films for each customer's top 2 categories.

There is a catch though - we cannot recommend a film which the customer has already viewed.

If there are less than 3 films available - marketing is happy to show at least 1 film.

Any customer which do not have any film recommendations for either category must be flagged out so the marketing team can exclude from the email campaign - this is of high importance!

2.4. Requirement #3 & #4

Individual Customer Insights

The number of films watched by each customer in their top 2 categories is required as well as some specific insights.

For the 1st category, the marketing requires the following insights (requirement 3):

1. How many total films have they watched in their top category?
2. How many more films has the customer watched compared to the average DVD Rental Co customer?
3. How does the customer rank in terms of the top X% compared to all other customers in this film category?
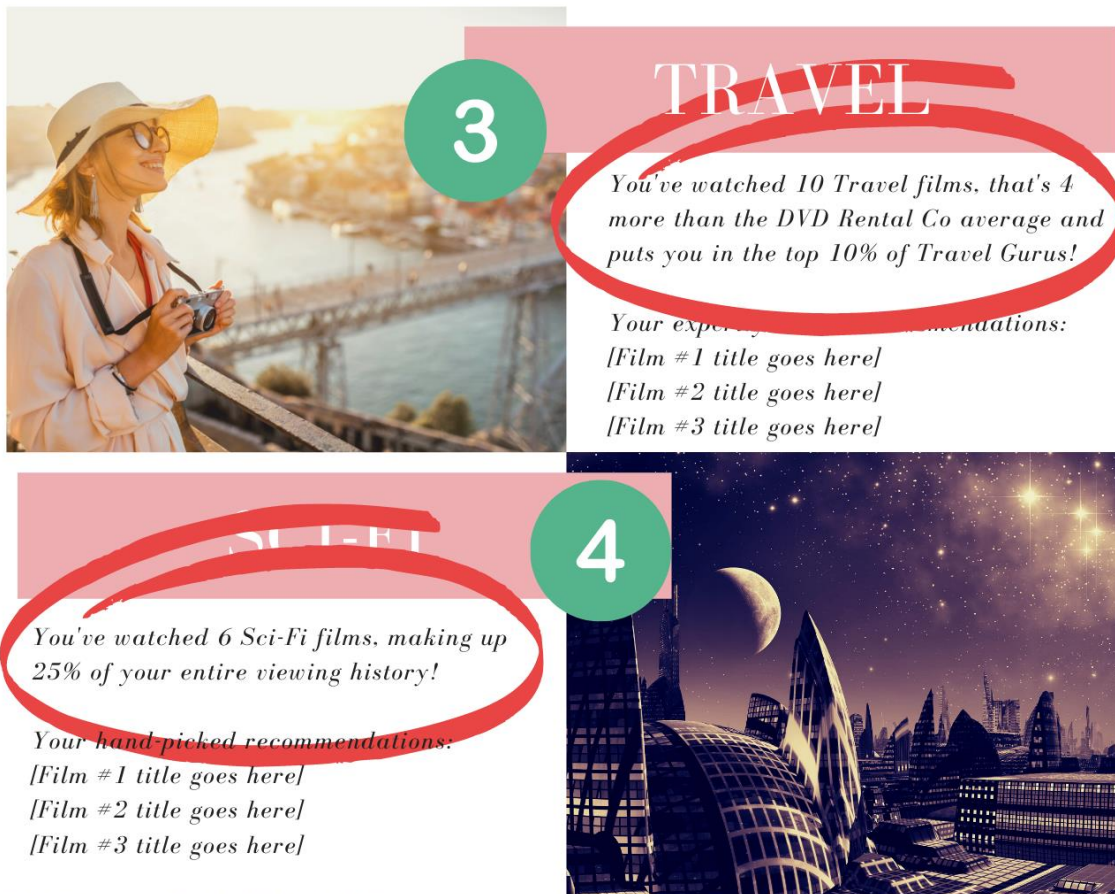
For the second ranking category (requirement 4):

1. How many total films has the customer watched in this category?

2. What proportion of each customer's total films watched does this count make?

Note the specific rounding of the percentages with 0 decimal places!

2.5. Requirement #5

Favorite Actor Recommendations

Along with the top 2 categories, marketing has also requested top actor film recommendations where up to 3 more films are included in the recommendations list as well as the count of films by the top actor.

We have been given guidance by marketing to choose the actors in alphabetical order should there be any ties - i.e. if the customer has seen 5 Brad Pitt films vs 5 George Clooney films - Brad Pitt will be chosen instead of George Clooney.

The same logical business rules apply - in addition any films that have already been recommended in the top 2 categories must not be included as actor recommendations.

If the customer doesn't have at least 1 film recommendation - they also need to be flagged with a separate actor exclusion flag.

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RUFUS PAWS

You've watched 5 films featuring Rufus Paws! Here are some other films Rufus stars in that might interest you!

[Film #1 title goes here]
[Film #2 title goes here]
[Film #3 title goes here]