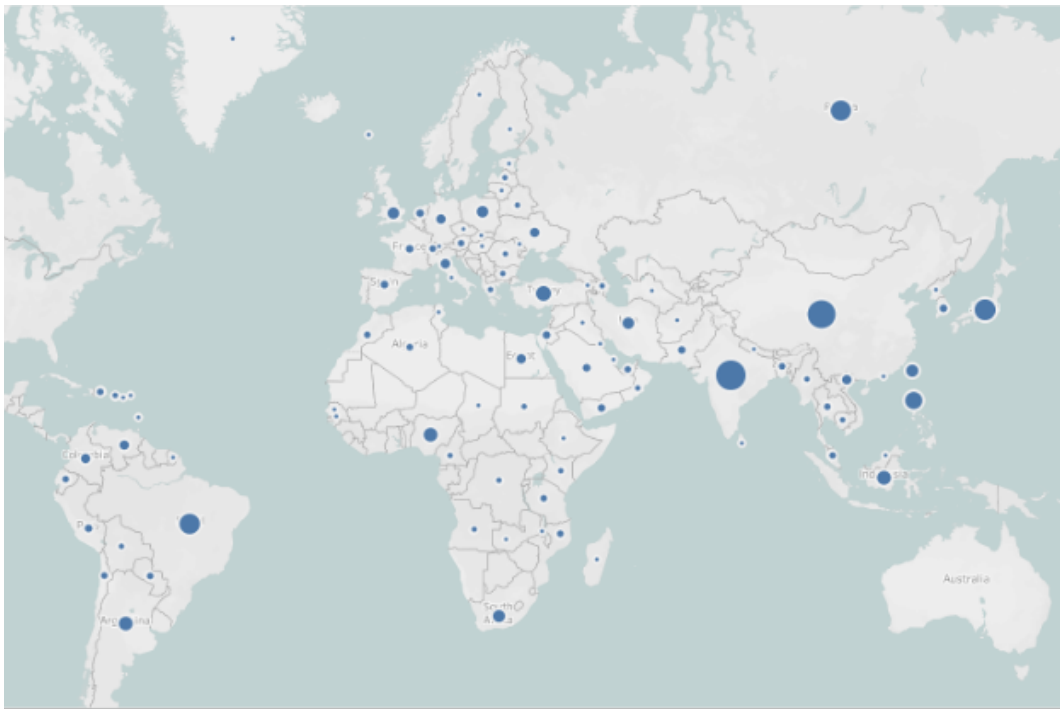
Rockbuster Top Customer Marketing Campaign

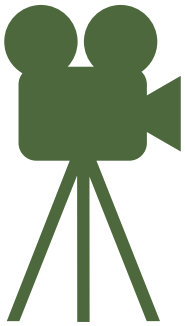


Case study by Julia Fortuny Wollny

2021

The challenge

Finding the top 5 paying Rockbuster Stealth customers worldwide in order to target them for a special reward campaign.



Rockbuster Stealth LLC is a movie rental company that used to have stores around the world. Facing stiff competition from streaming services such as Netflix and Amazon Prime, the Rockbuster Stealth management team is planning to use its existing movie licenses to launch an online video rental service in order to stay competitive.

The goal

Answering business questions, such as:

- **Which countries are Rockbuster customers based in?**
- **Do sales figures vary between geographic regions?**

Compiling results of the analysis into an easily digestible format.

Presenting them to the Rockbuster Stealth Management Board.

This project was created as part of the CareerFoundry Data Analytics program.

Role: Data analyst	**Project duration:** 1 month, delivered on time
Data used:	**Tools used:**
Rockbuster data set containing film inventory, customers, payments and more.	• PostgreSQL • PgAdmin • DbVisualizer • Tableau • Excel
Download here:	
Rockbuster project brief download	

SQL skills

➢ Write common SQL commands	➢ Perform joins, multiple joins
➢ Basic CRUD operations	➢ Define subqueries
➢ Order, limit, group data	➢ Write CTEs
➢ Filter data using WHERE and HAVING	➢ Create visualizations of SQL results
➢ Clean data in SQL	➢ Present SQL results to technical colleagues using Excel
➢ Create a data profile of summary statistics using SQL	➢ Create a data dictionary

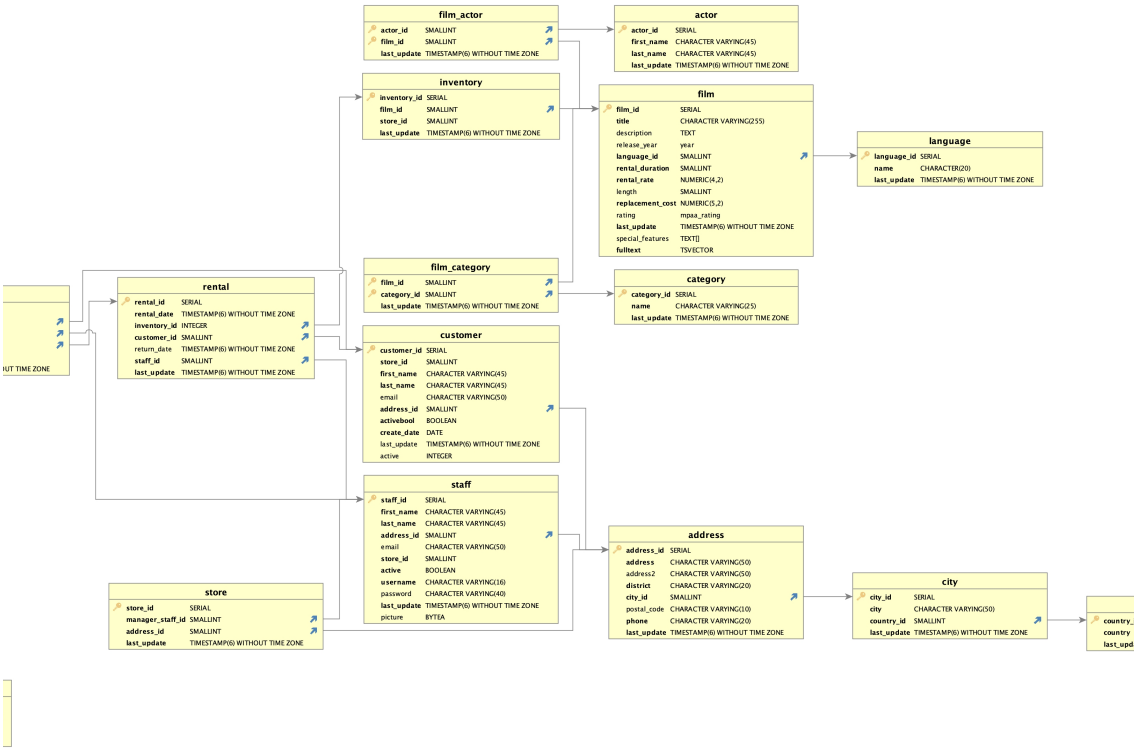
Approach & Methodology

Set up database environment → Create data profile and summary statistics → Extract necessary data → Analyse data & answer business questions → Create presentation

I started by **setting up a database environment** using the PostgreSQL GUI tool PgAdmin.

Then I **extracted the ERD** with the DbVisualizer.

You can find the complete ERD in high resolution here.



Extract of ERD of Rockbuster SQL database

I went on to create a **data profile** with **summary statistics** of each table by:

- ordering,
- limiting,
- grouping,
- filtering.

You can download the entire data summary here.

In this way I could **check the data for consistency and clean it** where necessary. This step was also important to get a first feel for the data.

Then, I proceeded to answer several ad-hoc questions using aggregations, such as:

- **What is the average, minimum and maximum rental duration of the films by rating?**

Query Editor | Query History

```
SELECT  rating,
        AVG (rental_rate) AS avg_rental_rate,
        MIN (rental_duration) AS min_rental_duration,
        MAX (rental_duration) AS max_rental_duration
FROM film
GROUP BY rating
```

Data Output | Explain | Messages | Notifications

	rating mpaa_rating	avg_rental_rate numeric	min_rental_duration smallint	max_rental_duration smallint
1	NC-17	2.970952380952381	3	7
2	R	2.9387179487179487	3	7
3	PG-13	3.034843049327354	3	7
4	G	2.888876404494382	3	7
5	PG	3.0518556701030928	3	7

The average minimum and maximum rental duration is the same across all ratings, namely 3 and 7.

The highest average rental rate is for films with PG rating.

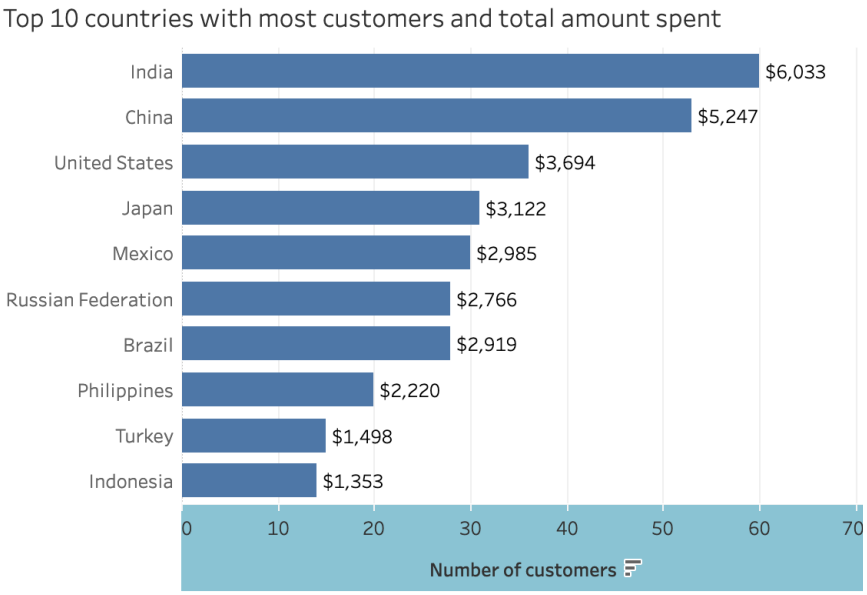
After that I proceeded to **extract the necessary data** for the main project through joining tables and performing subqueries / CTEs.

One of the most important steps in this project was **performing a multiple join** through 2 intermediate tables to find the country where customers are based in (customer, address, city, country).

Since this was a central business question, I had to be very careful to perform it carefully.

I then proceeded to analyse the data and answer central business questions, such as:

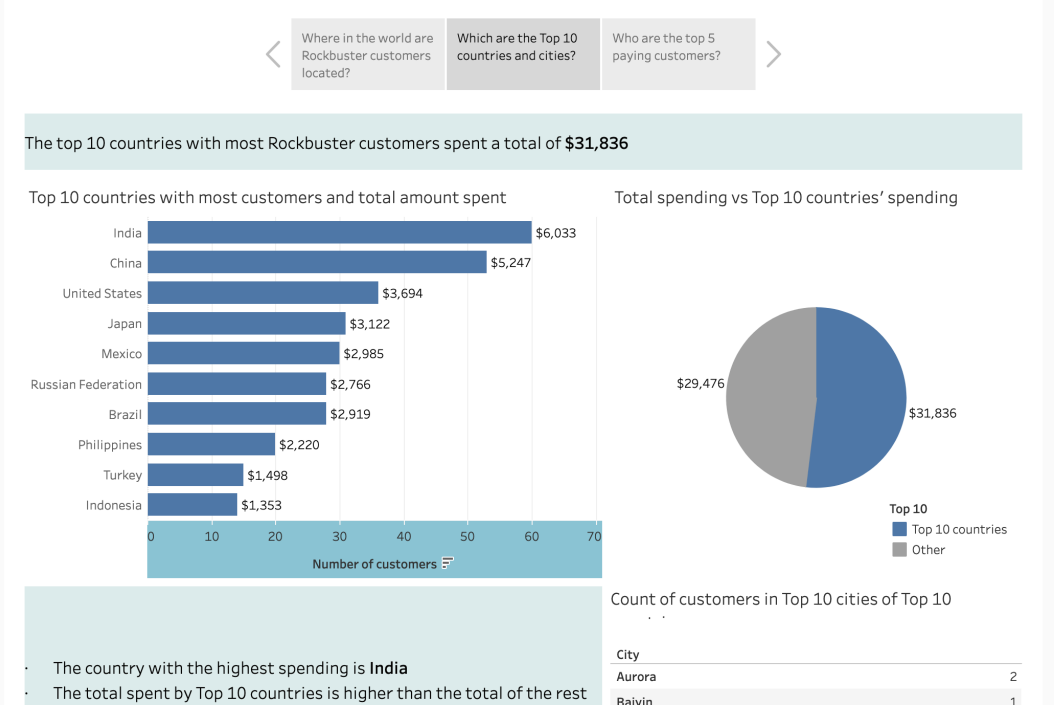
- **How high is the spending of the top 10 countries with most customers?**



The Top 10 countries with most Rockbuster customers spent a total of $ 31,836

I created a story in Tableau to present the results to the stakeholders.
You can find the full presentation here.

One **particular difficulty** I faced was that the marketing manager asked very specific questions from the beginning, which built on each other. For example:



- find the countries with most customers
- find the cities with most customers within those countries
- find the top spending customers in those cities

However, as I moved on with my analysis, I realised that the customer base in the countries with most customers is very spread out- the customers don't concentrate in specific cities!

Therefore, finding the top spending customers in each city in this case was pointless. **But how could I communicate that, when I had clear instructions and no chance to talk to the marketing manager before the delivery date?**

Recommendation

I decided to complete the report as required and include my recommendation in the last step.

Count of customers in Top 10 cities of Top 10

City	
Aurora	2
Baiyin	1
Balurghat	1
Huaian	1
Pingxiang	1
Rae Bareli	1
Rockford	1
Surakarta	1
Torren	1
Vitria de Santo	1

Finding the top spending customers in the cities with most customers of the countries with most customers wasn't very useful.

Because of that, at the end of my report I recommend removing the city filter to focus the marketing campaign on the **top 5 spending customers in each country.**

The marketing manager couldn't examine the interim results while the analysis was ongoing, so she did not foresee this issue.

I wanted to complete the report as requested but at the same time make sure that the marketing team would take the best-informed decision.

This is why I prepared some visuals to show the alternative version of the report, focussing on the top spending customers per country, as I suggested. In this way, I was ready to provide this additional data right after my presentation and discussion of the subject.

Future steps

Once the top 5 customers to reward have been identified, we can find out more about their specific movie rental habits, such as, for example:

- day of the week of the rental start,
- duration of rental,
- genre of the rented film,

in order to target the campaign even better.

Project deliverables

- Presentation including visualisations & a compelling story for business managers
- Raw SQL results for technical colleagues using Excel
- Data dictionary for reference (download here)

The full presentation can be found here:

https://public.tableau.com/app/profile/julia.fortuny/viz/RockbusterTopCustomerMarketingCampaign/Rockbustertopcustomermarketingcampaign

Find me on:

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