

# DATA VISUALIZATION CHALLENGE

With Bayer & Google



## THE CHALLENGE

HotelFlix, a leading figure in data-driven boutique hotel experiences digitalizing the entire booking process, is in search of your strategic expertise.

As this innovative company navigates the competitive market, your insights and guidance are crucial to enhancing its market position. This initiative offers you the unique opportunity to work alongside industry leaders, applying your knowledge, expertise, and data-driven strategic thinking to address HotelFlix's challenges.

Your participation is more than just attending; it's a pivotal role in shaping HotelFlix's future and revolutionising the boutique hotel booking landscape across Europe.

Embark on an engaging data visualization challenge designed to unleash your technical prowess and sharpen your strategic thinking in this data-driven opportunity.



## THE CASE

### PART 1.

#### UNDERSTANDING THE SEASONALITY OF THE BOOKINGS

**Objective:** HotelFlix aims to better understand when their customers make their reservations and increase the revenue creating a price model that increases the price of reservations in high season and decreases in low season.

##### TASK 1

Use the data to visualise **a line plot that shows the number of bookings per day and month** and use it to understand the seasonality of the bookings. Propose a new price model based on days, weeks or months, dividing the periods that you select in a minimum of 3 categories and a maximum of 5 categories. Justify your answer.

### PART 2.

#### CREATING THE SHAPE OF THE FUTURES HOTEL PACKAGES

**Objective:** Support HotelFlix understanding the typical period of time that the customers are in the hotels to create attractive different day packages. With this information HotelFlix expects to attract 20% more people to their hotels.

##### TASK 2

Use the data to see the different more **repeated days of stay in the hotel in a barplot**. Don't differentiate between weekends and week days. Here you can decide how many packages we need and for how many days. Don't be afraid, maybe if you sum one day more to these just created packages you attract more people.

### PART 3.

#### COMPREHENDING THE CANCELLATION FOUNDATIONS

**Objective:** Establish a good cancellation policy for all the bookings based on the past cancellations to help HotelFlix to save 25% of cancellations budget. Create different penalties for cancellations for different groups of days until booking.

##### TASK 3

Use the data to know the **number of days that elapsed between the booking date and the arrival data for the cancelled booking**. With this information, try to create different periods with different penalties that make sense to you. I.e.:

365 - 100 DAYS:	25% PENALTY
99 - 30 DAYS:	50% PENALTY
29 - 3 DAYS:	75% PENALTY
2 - 0 DAYS:	90% PENALTY

There is no perfect solution here, it is about **thinking about grouping the cancellations** based on the days from booking. Justify your response.

### Part 4

#### PREPARING THE IT SYSTEMS FOR THE DEMAND

**Objective:** HotelFlix wants to know when they will have peak demands in their booking system to provide a consistent solution without any interruption based on the past booking data that they have.

##### TASK 4

Using the number of days between booking and arrival date, calculate **the most demanded weeks**, show it in a plot and make a prediction about the next most demanded weeks. Justify your response.