How does Rain affect the Hotel Business?

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Problem Statement

I am engaged by a hotel in Singapore to analyse how rainfall in Singapore impacts the hotel business. As it is very easy now to check the upcoming weather when planning a holiday, during the rainy season, tourists might be less inclined to travel to Singapore, resulting in less business for the hotel. With my findings, the hotel hopes to be able to allocate their resources better in different periods of the year to maximise profits.
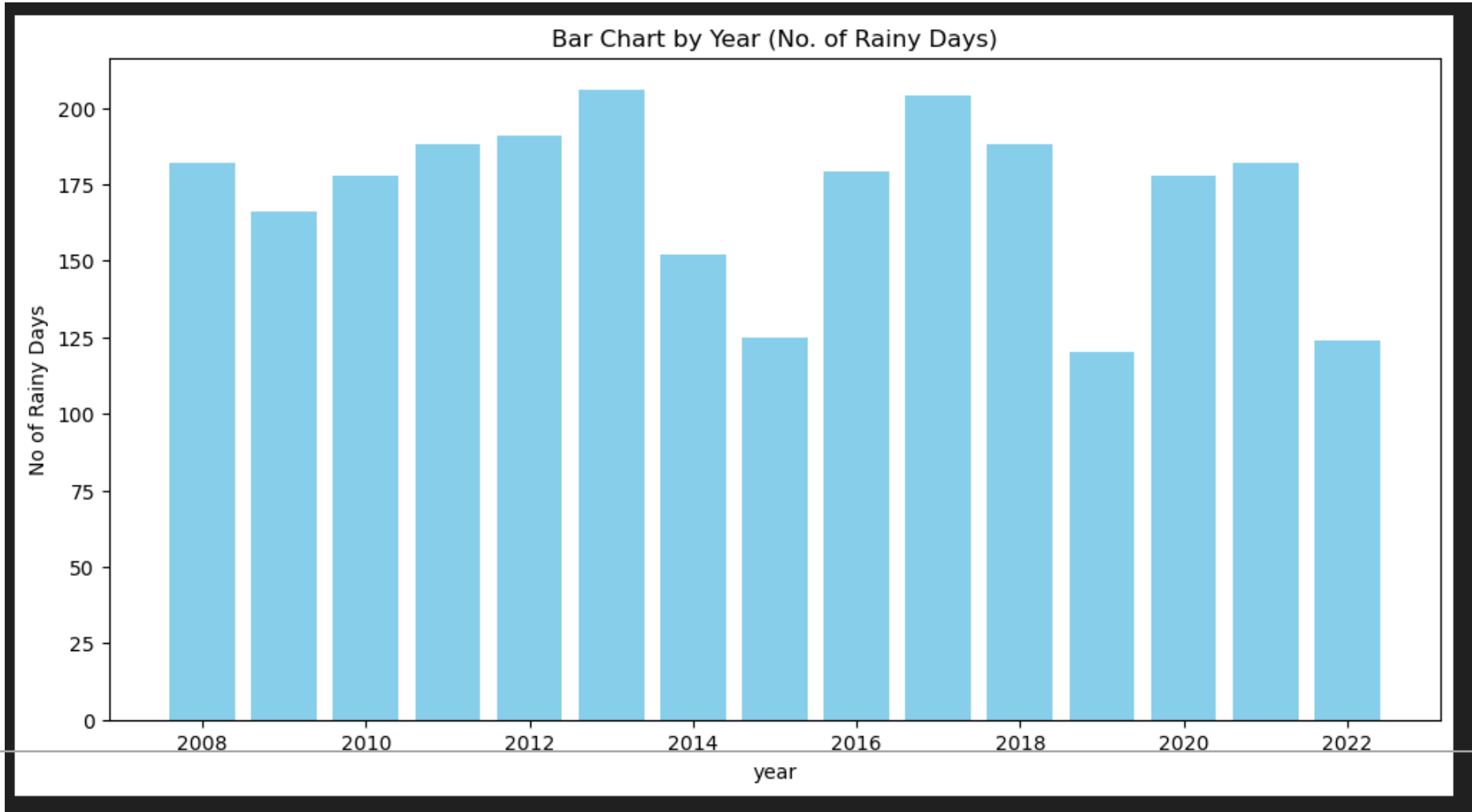
Data Analysed

1. Hotel Room Revenue

2. Standard Average Room Rate

3. Standard Average Hotel Occupancy Rate

4. Number of Rainy Days

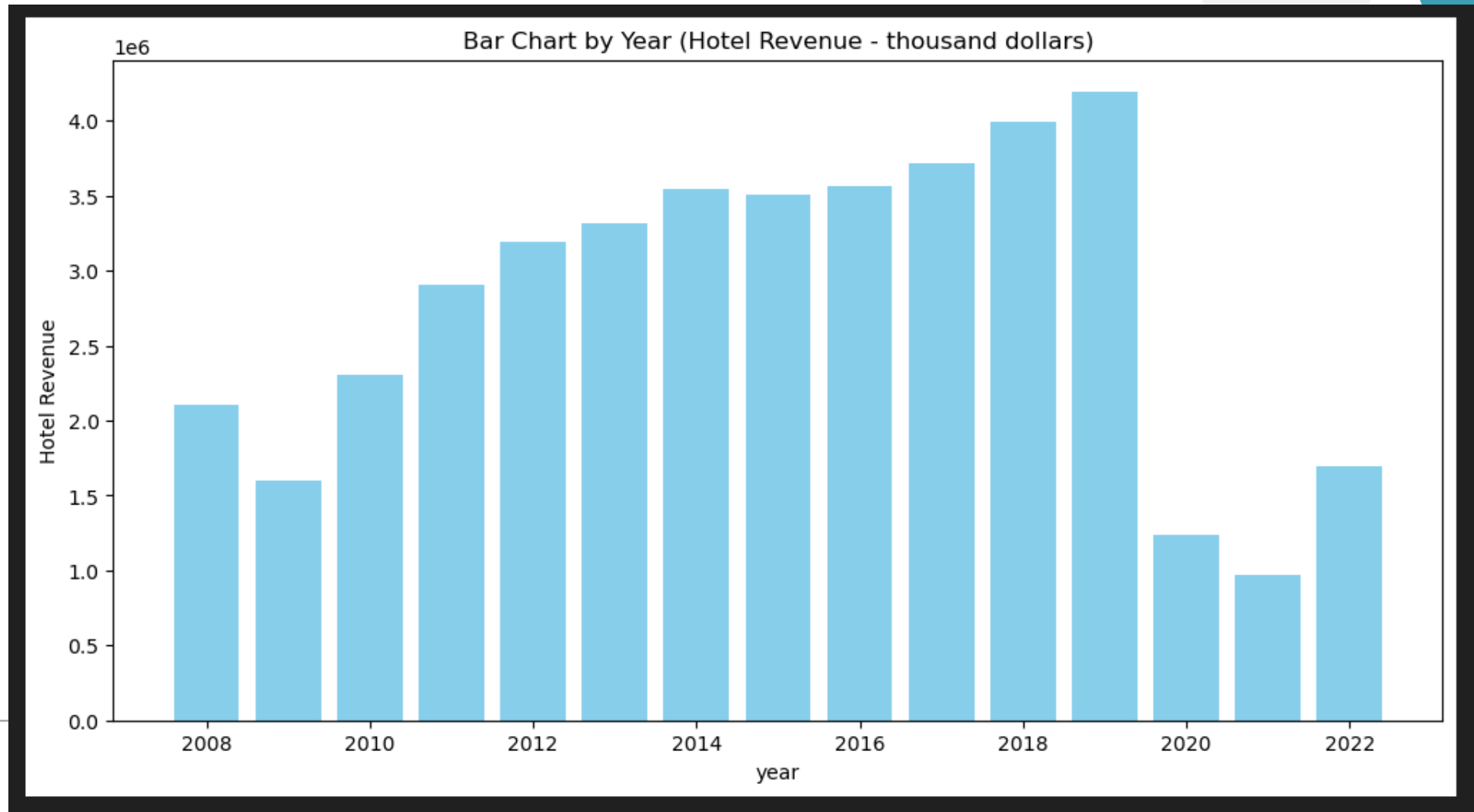5. Month (from January 2008 to August 2022)
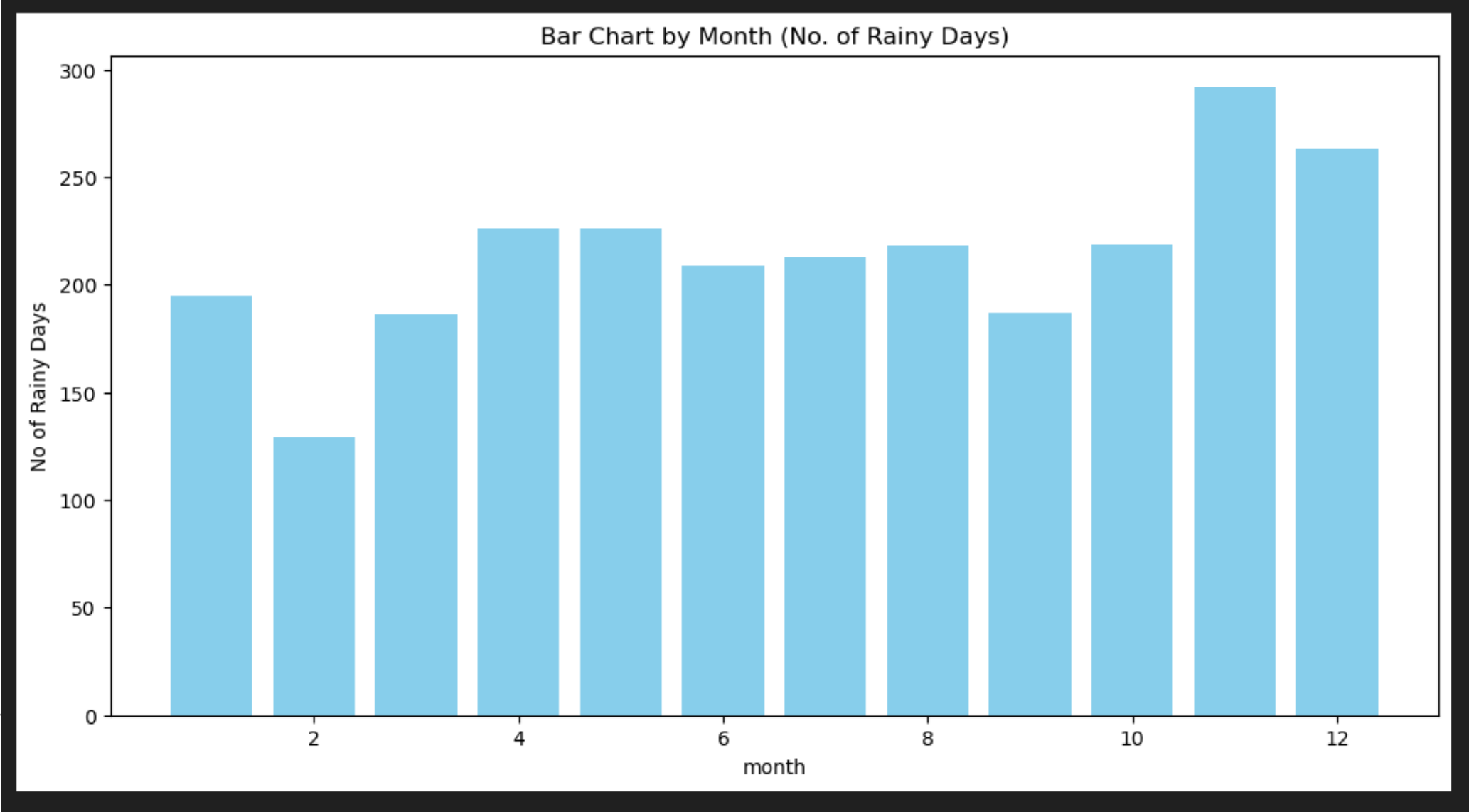
Number of Rainy Days Histogram
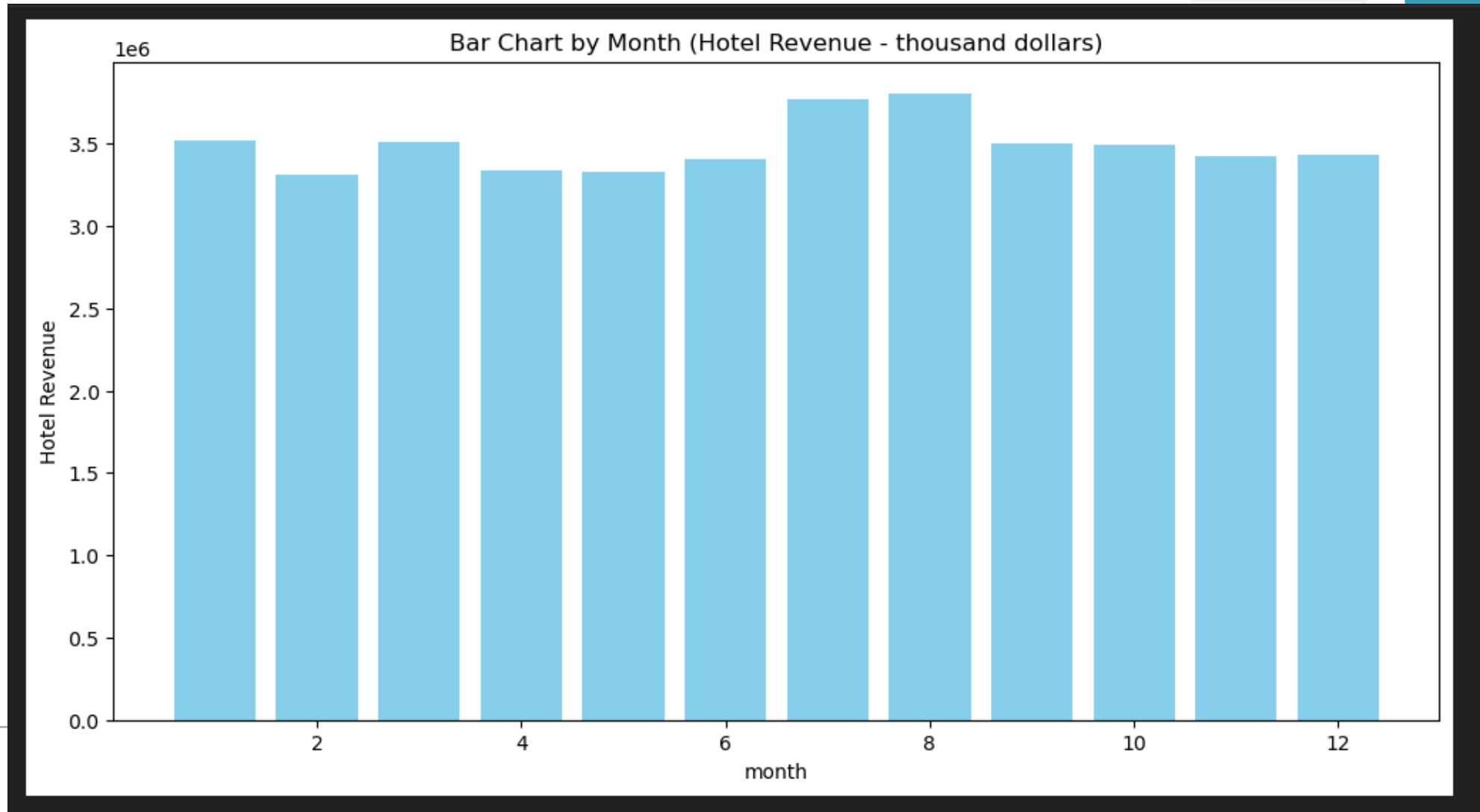

Histogram of Number of Rainy Days per month (2008-2022)

Number of Rainy Days by Year

Bar Chart by Year (No. of Rainy Days)
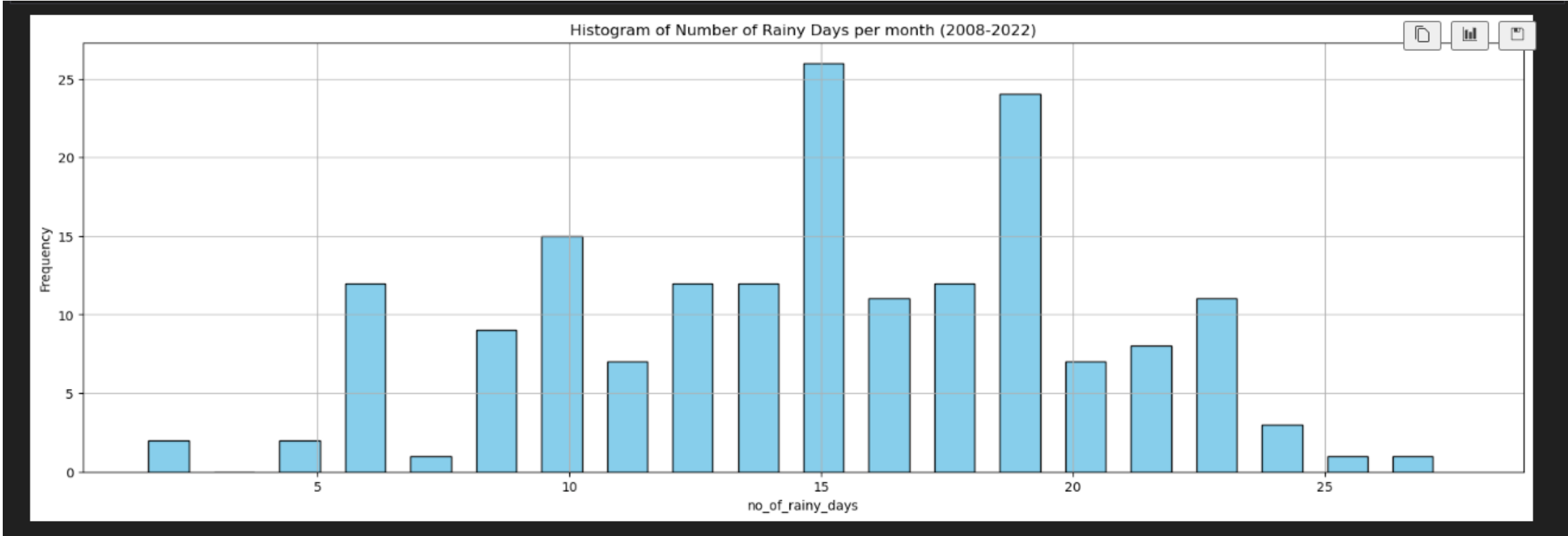
Hotel Revenue by Year

Number of Rainy Days by Month

Bar Chart by Month (No. of Rainy Days)

Hotel Revenue by Month

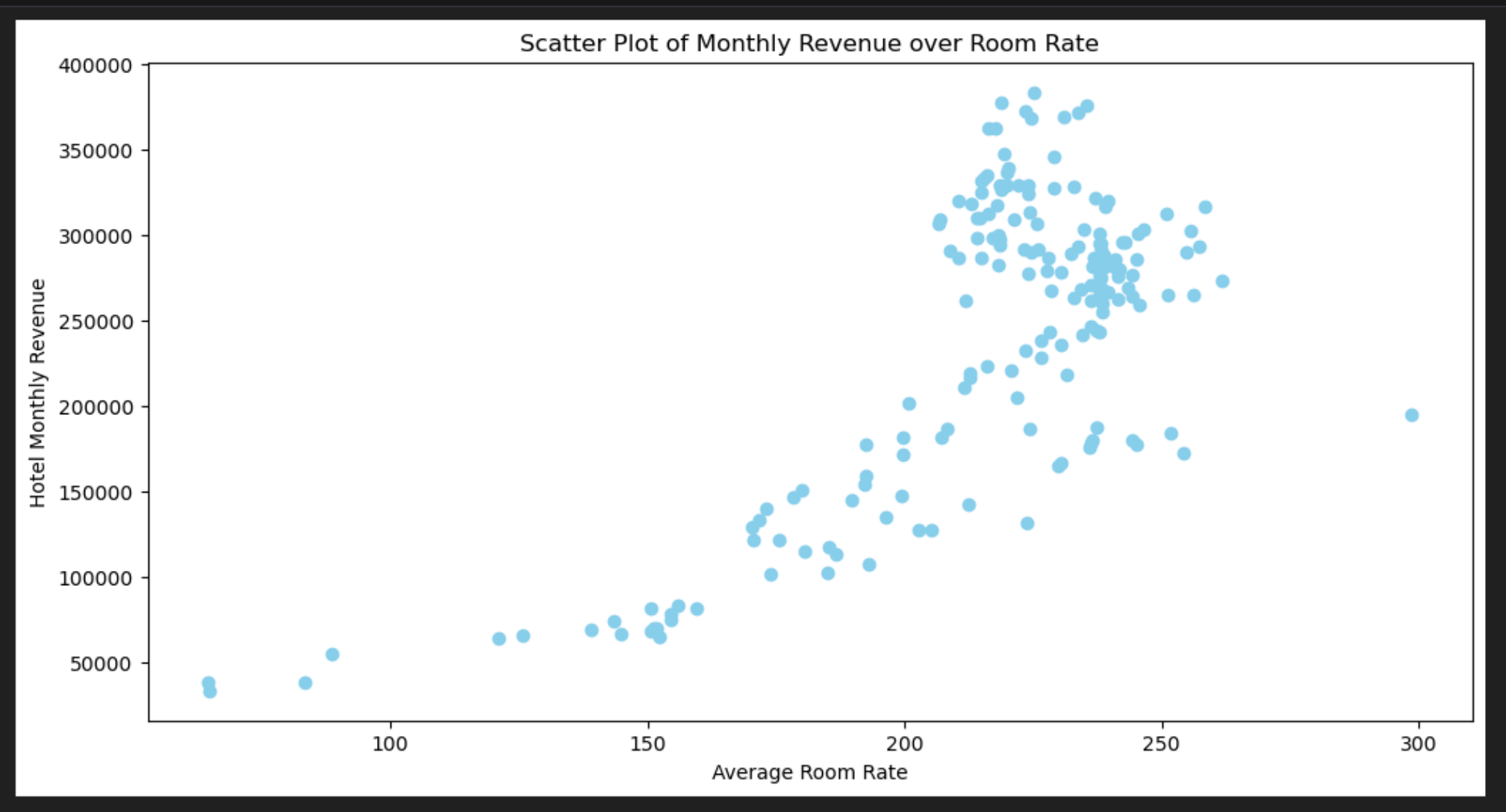# Hotel Occupancy by Year

Bar Chart by Year (Hotel Avg Occupancy)
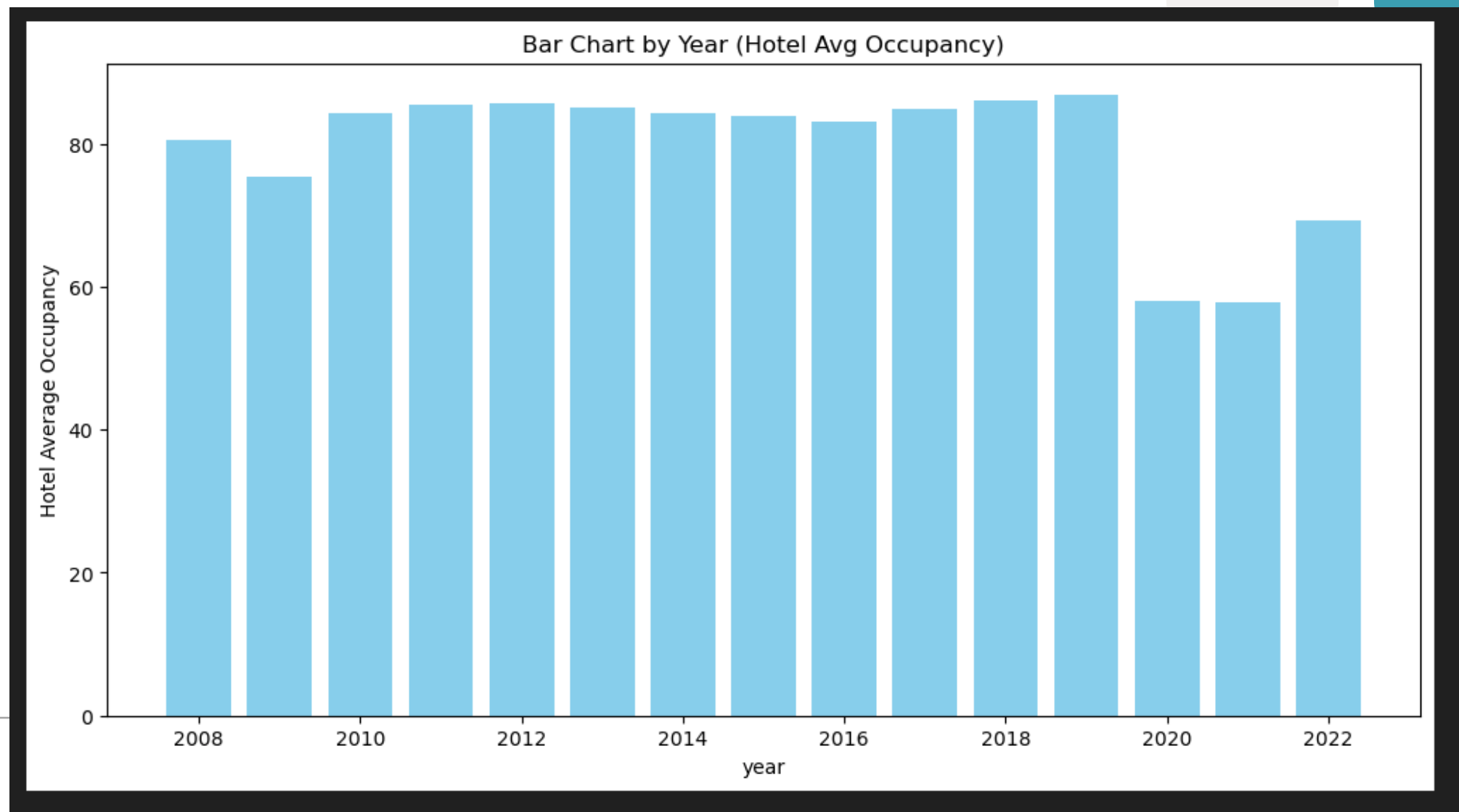
Hotel Occupancy by Month
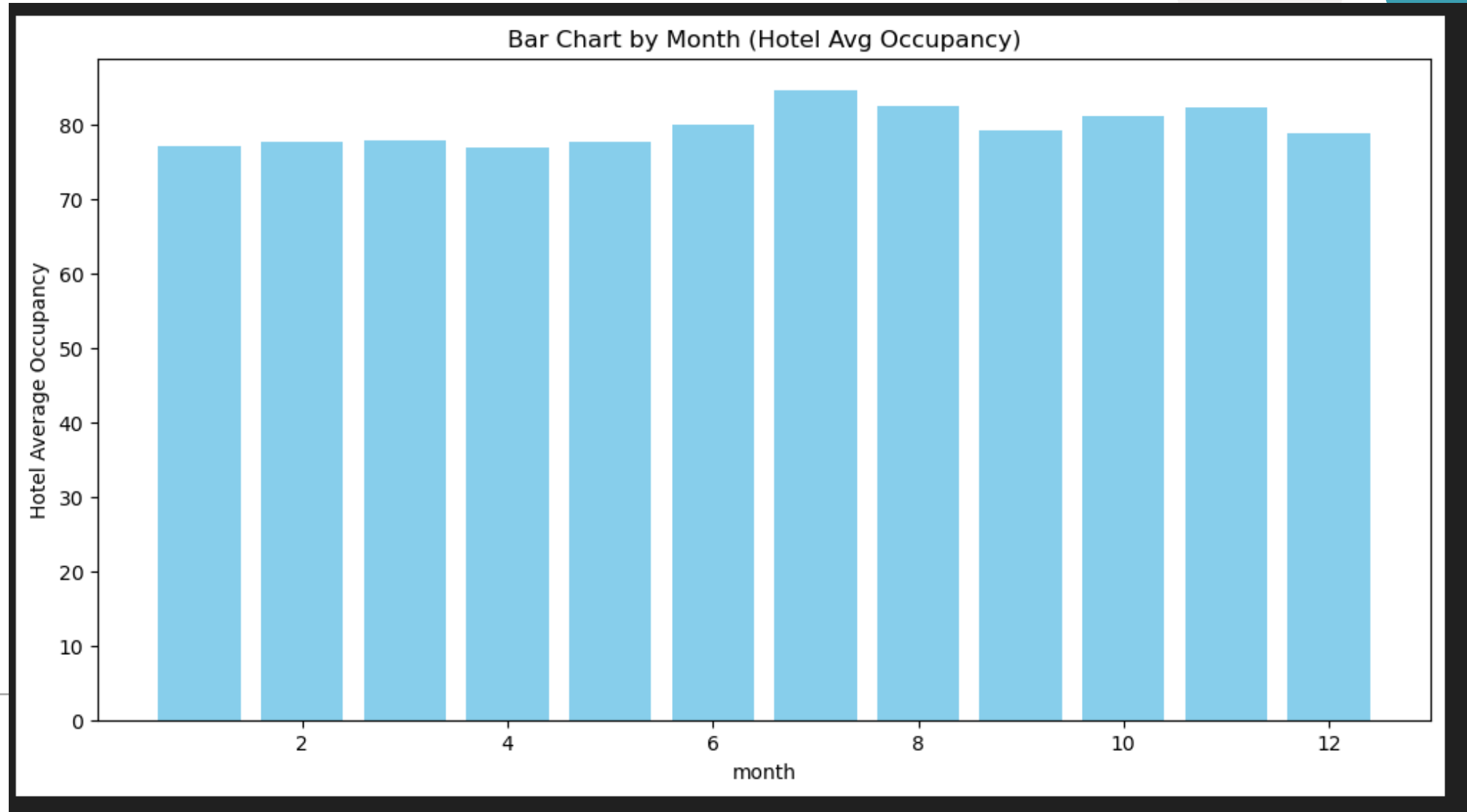
Monthly Revenue and Average Room Rate

Scatter Plot of Monthly Revenue over Room Rate

Conclusion

- Amount of rainy days does not vary greatly in Singapore throughout the year

- Number of rainy days seems to not have a significant impact on the number of tourists staying in Singapore's hotels

- Time periods do not seem to play a major role in customers staying in hotels

  - Biggest factor is in fact <mark>room prices</mark>, where tourists are most likely to pay for rooms priced between <mark>200-250</mark> -> wealth level of tourists who visit Singapore, tourists prioritise <mark>comfort and quality over cheap pricing</mark>

- Areas for further analysis: Other increasingly popular accommodation options like Airbnb, which could significantly affect the hotel industry in the future

Thank You