Case Study 1

Rishi and Qasim are friends since college. Both are now working in the corporate world – Rishi in the USA, and Qasim in Mumbai. They have met after a long time and their conversation goes as follows.

Qasim: Rishi, I heard that you are not coming back to India.

Rishi: Not at all! I am looking forward to apply for green card in a couple of years, and then possibly citizenship in another couple.

Qasim: Why though? India is in such a great shape now. Did you hear PM's speech the other day? Not only India is the fifth largest economy now, but we will get the status of "developed country" by 2047. I think it's a good time to be in this country.

Rishi: That's just vision and promise. How many times have you seen politicians to eat their words? More often than ever, right?

Qasim: True, but this time data is in our favour. Did you see that we are actually the third largest economy in terms of purchasing power parity?

Rishi: I saw. I also saw that in terms of per capita income, we are ranked above 100. What would you say about that?

Qasim: The country is improving, trust me. We are one of the leaders in consumer market, service sector etc., and the government are planning well to ensure that the growth is constant.

Rishi: See, the only thing India will lead in is the population. And possibly unemployment and number of beggars.

Qasim: That part I strongly oppose. Why would you look at population? India is a big country; we should always look at population density. Do you know that developed countries like Singapore, Korea or Netherlands have greater population density than us?

Rishi: Umm, I did not know that.

Qasim: And talking about unemployment, it's even more interesting. In recent years, your loving USA actually has a higher unemployment rate than my India.

Rishi: What the hell are you saying? I don't believe this.

What data will you be using and how can you use suitable data summarisation or visualization to narrate the story Qasim is trying to establish?

Case Study 2

Policymakers are interested in gaining insights into the ESG performance and risk profiles of major corporations. Mr. Murthy, a business analytics consultant, has managed to collect data that lists relevant information for 287 companies. A snippet of the dataset is shown below.

Symbol	Sector	Full.Time.Employees	Environment.Risk.Score	Social.Risk.Score	Governance.Risk.Score	Total.ESG.Risk.score	ESG.Risk.Level	Controversy.Score
DPZ	Consumer Cyclical	6500	10.6	12.2	6.3	29.2	Medium	2
DVA	Healthcare	70000	0.1	14.1	8.4	22.6	Medium	2
DRI	Consumer Cyclical	187384	7.9	15	4.6	27.5	Medium	2
ZTS	Healthcare	14100	3.2	6.8	8.7	18.8	Low	2
ZBH	Healthcare	18000	3.6	14.5	7.9	26	Medium	2
YUM	Consumer Cyclical	35000	4.5	11.4	4.1	20.1	Medium	2
XYL	Industrials	23000	4.3	8.7	5.2	18.1	Low	1
WYNN	Consumer Cyclical	27800	3.4	11.8	10.6	25.7	Medium	2
WTW	Financial Services	48000	0.1	7.8	10.8	18.7	Low	2
WY	Real Estate	9300	9.1	4.2	3.5	16.7	Low	2
WDC	Technology	53000	1.5	3.9	6.1	11.4	Low	2
WELL	Real Estate	533	4.2	3.5	5.5	13.2	Low	1
WFC	Financial Services	224824	2	14.8	19.4	36.2	High	4
WM	Industrials	48000	8.1	5.2	3.3	16.6	Low	2
WBA	Healthcare	330000	1.8	9.3	5.2	16.3	Low	3

Mr. Murthy wants to understand the impact of controversies on the Total ESG Risk Score. Also, it will be good to know whether bigger companies are more prone to bigger controversies and/or bad performances in terms of ESG.

How can he use suitable data summarisation or visualisation to build the story?

Case Study 3

Rhea and Siddhartha are flatmates in Bengaluru, staying together in the Koramangala area. They have made it a routine to have their dinner together, and chat about how the day has gone by for both. In one such night, Siddhartha tells Rhea, "I don't want to have home-cooked food today, let's order from outside".

Rhea: What do you want to have?

Siddhartha: How about Chinese? We can order from *Shanghai Social*. I went there once and absolutely loved their food.

Rhea: But I think they take a lot of time to prepare food and deliver. I am really hungry, *Sid*.

Siddhartha: Fine, let me check, but thank God you're not in Kolkata! Most restaurants take at least 40 to 50 minutes there.

Rhea: (Jokingly) Restaurants are so good there, that they are excused for the delay.

Siddhartha: Food scene is great in Kolkata; but I think restaurants are equally good here too. Only thing is that they are bit more expensive.

Rhea: Well, you're a data scientist. Do your magic and explain if it is indeed so. And, also, check the delivery time and rating here, then tell me the best restaurant so that I can eat soon!

What data will you be using and how can you use suitable data summarisation or visualisation to help Rhea and Siddhartha in their arguments?