

Data analysis of Mobile data usage and the Weather

DSI 39
Elliot Tan

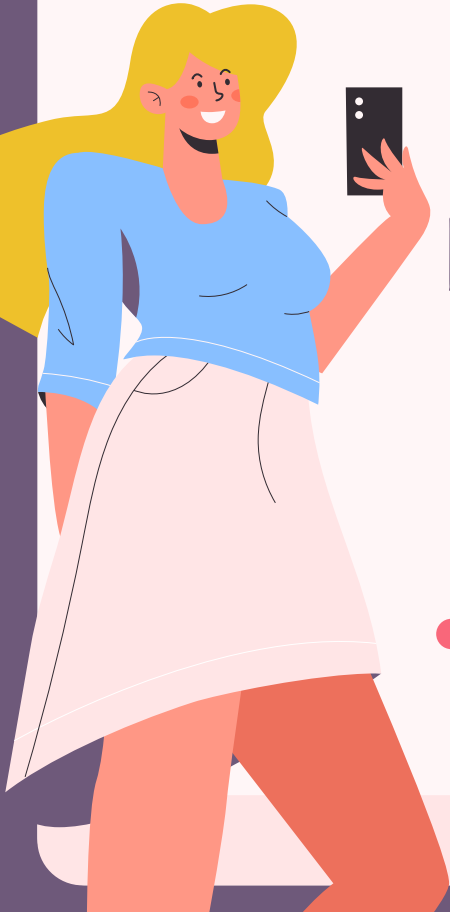


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Context

I am a data scientist from Accenture.

The audience are stakeholders of a new telco, MyRepublic.

 **accenture**



MyRepublic™



Market

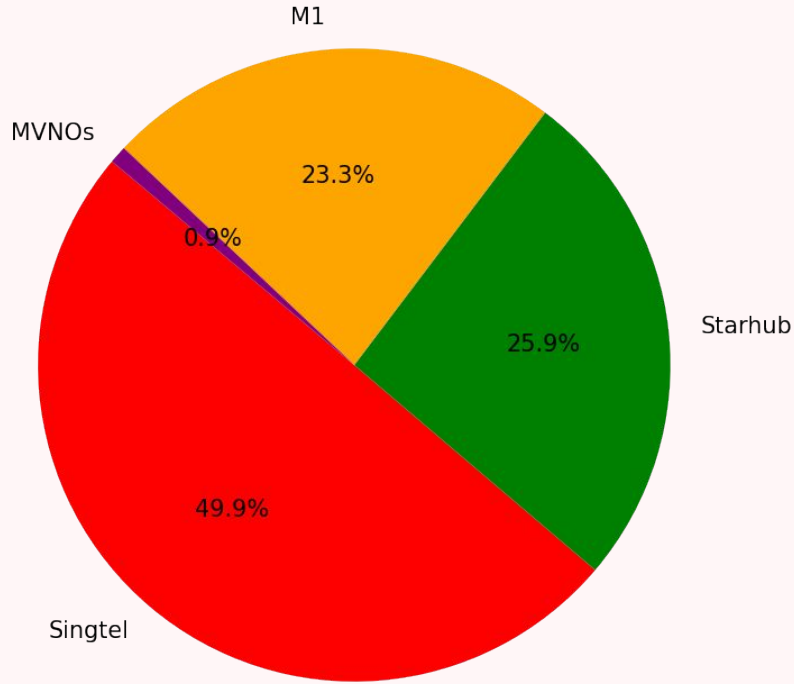
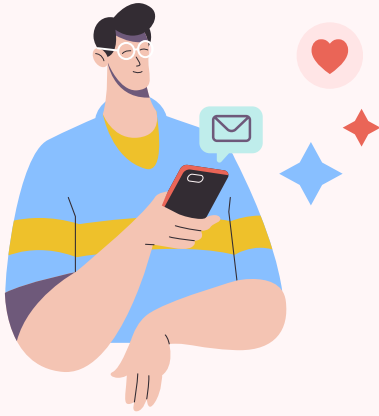
\$1.78 billion

Mobile service revenue in Singapore 2022

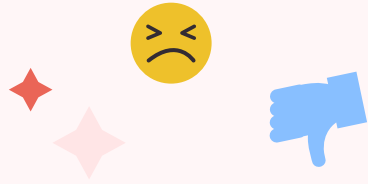


Source: <https://www.telecomlead.com/5g/singtel-will-continue-to-dominate-mobile-services-market-in-singapore-109722>

Market share



Source: <https://www.statista.com/statistics/1007915/singapore-mobile-revenue-market-share/#:~:text=As%20of%20this%20date%2C%20Singtel%20accounted%20for%20around%2026%20percent.>



Problem

Do Singaporeans **use more mobile data** during quarters with more **rainy days**?

Knowing the trend, how does a company capitalise on this to **capture more market share** in the mobile services industry?



Q4 has the most number of rainy days on average



Average number of rainy days by quarter

Q1

35 days

Q2

44 days

Q3

43 days

Q4

56 days

There tends to be more rainy days in the last quarter of the year.

A day is considered to have "rained" if the total rainfall for that day is 0.2mm or more.



Q4 has the most amount of mobile data on average



Average amount of mobile data by quarter

Q1

5.4 pb

Q2

5.9 pb

Q3

6.4 pb

Q4

6.6 pb

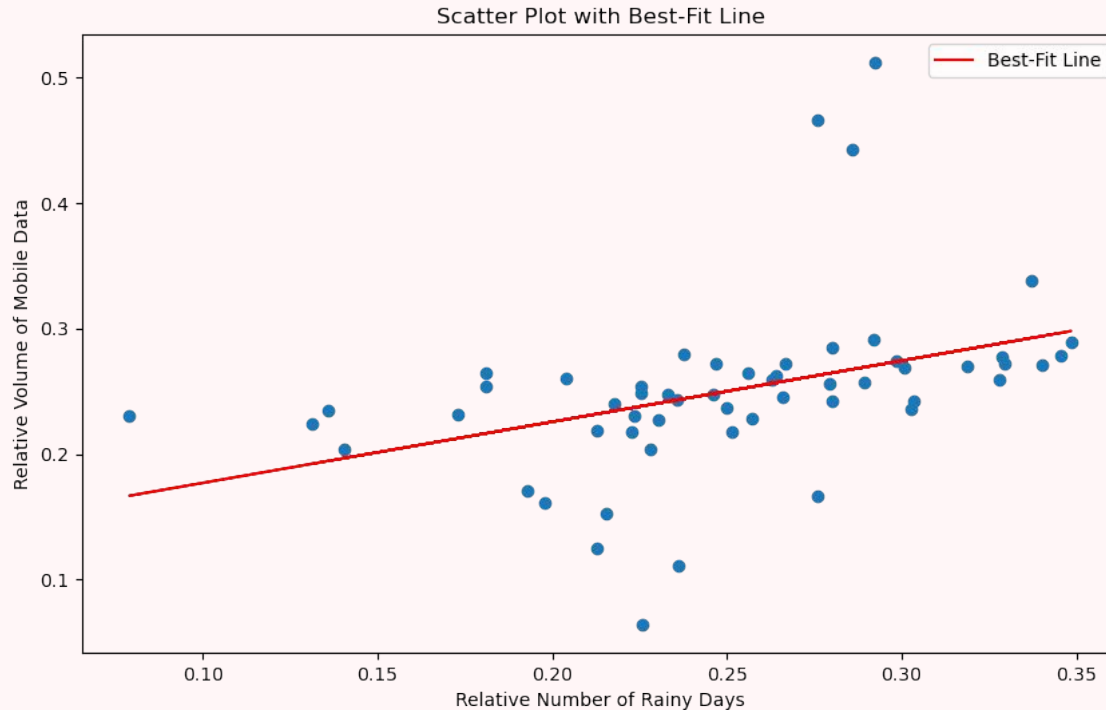
There is more mobile data usage during the last quarter of the year

Pb: Petabytes

Positive correlation between rainy days and mobile data usage

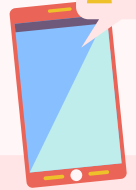


Relative number of rainy days vs relative mobile data usage



There is a correlation of 0.39 between the variables which indicates that they have directly proportional relationship.

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Relative volume of mobile data compares the quarter to the year.
Relative number of rainy days compares the quarter to the year.

RECOMMENDATIONS



WHAT TO DO

- To enhance **customer satisfaction and retention**, one strategic option is to provide customers with a **data boost** during the rainy last quarter.
- Another avenue for consideration is to implement enticing **promotional campaigns** during periods of increased rainfall, thereby seizing a larger share of the market.



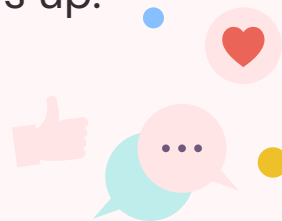


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Future Work



- Collect the **daily data** of mobile data usage rainfall.
- Check if any **other feature** has a higher statistical significance.
- Do a **cross reference** study with other countries to see if the trend holds up.



THANKS!

DO YOU HAVE ANY QUESTIONS?

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