

MATH 513 Practical Presentation

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Introduction

- Samsung and Apple as competing businesses
- Flagship phones chosen
 - ▶ S20FE
 - ▶ iPhone12
 - ▶ provides freshest data
- S20 was chosen for demonstration purposes

Tools Utilised

- RTweet
- Rstudio
- Twitter Developer API



SAMSUNG



Examined the key hashtags that were being used for the phones chosen

- Checked Samsung's Twitter feed
- Checked Tim Cook's Twitter feed
 - ▶ Apple's Twitter contains no tweets
- Checked for number and age of tweets using a simple Twitter search for several hashtags
- Avoided people so we can get a wide range of options/tweets for a more rounded data set

Issues and overcoming them

- Date refinement on Twitter Premium API functions only
 - ▶ Dev suite allowed limited access to full archive and 30 day extraction features
- Possible duplication if we extracted at the same time
 - ▶ Full archive and 30 day extraction allowed for refinement of dates and pull tweets back to 2006
- Extraction limited to 18k per 15mins
 - ▶ Controlled pull of tweets with date refinement over time as retry on rate limit did not function as expected
- Foreign languages
 - ▶ Filter by language of 'en' applied to only pull English tweets
- Different regions with different opinions
 - ▶ Region filter didn't work in test so we concluded we would examine this in the analysis stage
- Tweets are pulled from date to backwards to date to
 - ▶ Pull tweets in a controlled manner using weeks and days

Results - Overview of Twitter Data

Time series plots of data pulled from Twitter Iphone12 S20FE S20

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Results - Sentiment Analysis

Overview of sentiment analysis

Choice of feature to analyse

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Improvements & Further Study

Improvements Google Maps API to have region filter

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Conclusions

Twitter data provides up to date information for companies to analyse for customer feedback Data can provide useful information when analysed correctly

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References

- R Markdown Cheat Sheet
 - ▶ <https://www.rstudio.com/wp-content/uploads/2015/02/rmarkdown-cheatsheet.pdf>
- R Markdown Reference Guide
 - ▶ <https://www.rstudio.com/wp-content/uploads/2015/03/rmarkdown-reference.pdf>
- MATH513 Lecture and Tutorial Code, Luciana Dalla Valle, University of Plymouth
 - ▶ <https://dle.plymouth.ac.uk/course/view.php?id=49628>