

COURSEWORK 2 - Stock Tweet Analysis

Final Report Deadline: Friday 5th Jun 2019, 4pm

Submission: Electronic submission via the module's Moodle Site.

1. The Problem Definition:

In this coursework, you have been asked by a company, APPLE Inc. to do an exploratory analysis of the public's view of its stock - as seen through the lens of social media (twitter). This is because the company itself are going to monitor the public view's towards the company, and so wish to undertake this first exploratory analysis. You are tasked with:

1. Unpacking those tweets' contents, and from these providing a breakdown analysis of the company's relationship with people on social media (n.b., this might include an exploration of items drawn from: prevalence of mentions; engagement; key descriptive words occurring in relation to the stock; topics arising; attitudes or types of users mentioning the stock; analysis of sentiment surrounding the tweets; geospatial location of mentions; temporal nature of mentions; etc. - the choice is open and up to you; you are not expected to cover all of them in a pilot, exploratory analysis).
2. Identifying a further analysis direction that relates to the outcome of current stock tweet analysis.
3. Completing a report (3000 words including all visualizations you select - no appendices will be accepted) summarizing these analyses.

2. Expected Approach:

The data may be analysed in any form you see fit - you may analyse it to evidence reach, mentions, attitudes to the stock, sentiment associated with stock, geographical patterns, indeed anything you think may be relevant to understanding the stock. However, as detailed above, **you must apply some form of analytics technique during this process**, rather than taking a purely qualitative approach.

3. Report Structure

To present your exploration, you will provide a report of this pilot study that clearly describes your purpose, the approach and techniques you have taken to underpin your work, and the results of that analysis (including visualizations where appropriate). You must also identify at least one **potential further analysis direction** the company to engage with (along with some form of justification), before wrapping up your insights in a final conclusion section. Expected sections are as follows:

- 1. Executive Summary:** including a description of the task, a summary of your technical approach, a summary of the data that underpins it, a summary of the results, and a summary of the insights you have arrived at.
- 2. Approach breakdown:** a summary of the process that you have undertaken to analyze the data, to summarize results, and to draw conclusions.
- 3. Data Collection section:** A summary section quickly detailing the data you have obtained, and upon which your analysis is based. This should include at the absolute minimum including information the number of tweets obtained, the data item used, the number of unique users analysed, the date range and the geographical area focused on (this may be global, but please do specify).
- 4. Analysis section:** In this section, which will comprise the bulk of your report, you must summarize your investigations. Please feel free to split this into different subsections based on the techniques you examined, or angles you took to considering the text surrounding tweets, the locations they were produced from, and the people/companies that were mentioning them.
- 5. Further Analysis Recommendation:** Here you will provide a summary of the further analysis you recommend to the company to engage with based on current result of Tweet analysis.
- 6. Conclusion:** A brief conclusion summarising the key parts of your analysis, and any recommendations you have for the business if they were to extend this pilot study into a full analysis.

4. Marking Criteria

Your submission will be assessed based on the following mark scheme:

- Executive Summary (5 marks)
- Methodology Section (10 marks)
- Analysis and Description of Results (55 marks)
 - Stock Tweet Exploration (40 marks)
 - Further Analysis Recommendation (15 marks)
- Conclusion, Insights and Recommendations (5 marks)
- Technical Implementation (20 marks)
 - Functionality (15 marks)
 - Clarity and Commenting (5 marks)
- Overall presentation and professionalism of Report (5 marks)

5. What you need to submit

- A report on your exploration - 3000 words maximum. See the report section for the structure and to understand what is expected. The document name should be your **Student ID_Name**.
- All code / notebooks / tableau files. I expect at least:
 - A commented Jupyter notebook containing the code that reloads in these tweets, and performs analysis on them that you then describe in your report.
- Supporting data files should be included containing the tweets and any other data items that you used, that can be run through your analysis script.

6. How to submit

- Submission is electronically via Moodle. The submission link will be made available shortly.
- **DUE DATE: Tuesday 28 May, 11.59pm.**