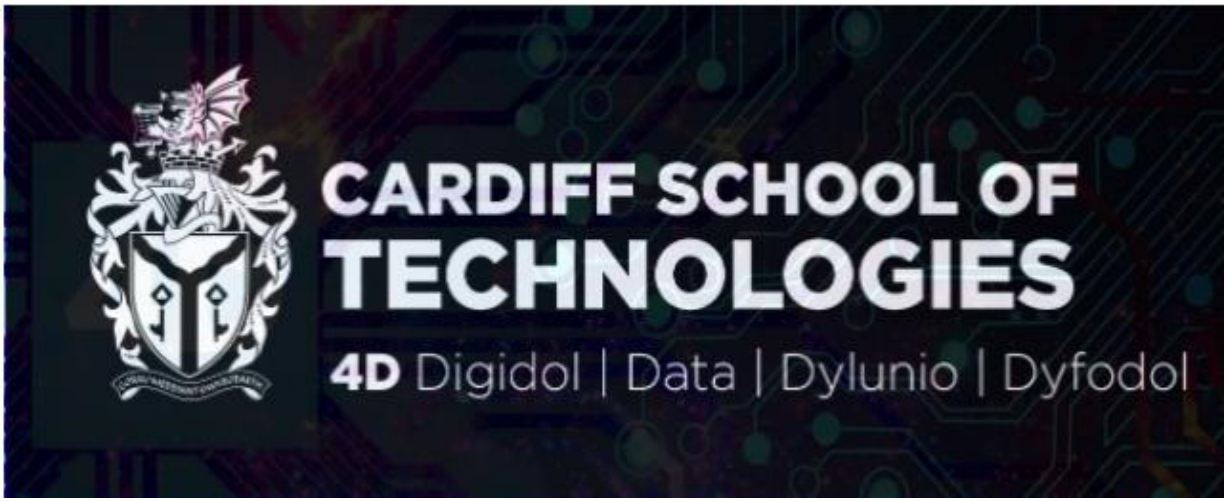


Academic Year – 2024/25

CIS7028 – Social Media Analytics for Business

Term – 2

Module Leader : Dr. Chow Siing Sia

Comparative Social Media Analytics of Telecommunication between GiffGaff and iDMobile

By

Aaditya Vengatachalapathy

MSc Data Science

St20290358

Biography

My role in this assignment is to examine the data from two distinct mobile networks in the telecommunications market as an independent data analyst for an upcoming telecommunications company from Section J. As an analyst, I will contrast GiffGaff and iD-Mobile, two of the major mobile network competitors. In this project, I'll utilize a variety of tools and approaches to obtain and retrieve social media data from both competitors, organize it into insightful charts and graphs, then use these charts and graphs to draw some insightful conclusions.

Abstract

Purpose

This abstract uses social media analytics to compare user engagement, sentiment, and brand perception between iD-Mobile and Giff -Gaff. Using data mining techniques, the study offers insights into consumer interactions, satisfaction levels, and competitive positioning in the telecom industry. The results assist both companies in making strategic decisions that will raise their level of customer satisfaction and competitiveness in the market.

Methodology

When conducting research, I employ a range of methods and resources that I choose from a wide range. Likes, comments, and other Facebook and You-tube data may be retrieved from the official Giff-Gaff and iD-Mobile pages using specific tools. Information from Facebook, Trust-pilot, and YouTube channels, including likes, shares, and comments, are gathered using Data Miner, the Shared-Count web application tool, and Python code. Data sources such as Excel and visualizing tools like Tableau are used to evaluate the retrieved data. Additionally, a few Google Chrome extensions are in use. The You-tube API and Azure Machine Learning add-ins are utilized in a technique that assesses the data of YouTube comments.

Findings

By sorting data for both businesses, it has been determined that Giff Gaff outperforms iDMobile in terms of overall social media interaction across nearly all social media channels. In the case of the mobile network market, the massive GiffGaff surpasses iDMobile in terms of social interaction and positive evaluations, demonstrating the potential of social media of mobile network to boost business success.

Table of Contents

List of Figures

List of Abbreviations

- API - Application Programming Interface
- IDE - Integrated Development Environment
- GPU - Graphics Processing Unit
- TPU - Tensor Processing Unit
- URL - Uniform Resource Locator
- ID - Identification
- NLP - Natural Language Processing
- NLTK - Natural Language Toolkit

Chapter-1-Introduction

1.1 Motivation of the project

Social media is a vast platform that facilitates communication between individuals, communities, and organizations. Social media makes it easier for someone to stay in touch with friends and family in their personal life. Social media has a tremendous potential to expand and impact a brand's or company's success. It is beneficial for businesses or organizations to share with their clients information about their operations or opinions about their goods. Social media makes it possible for people to communicate with one other who live in various cities or nations. Social media allows users to update any information at any moment (Lutkevich, 2021).

In the modern world, brands compete not just in physical stores but increasingly on social media. This study will look at the social media strategies and interactions of two significant brand rivals, iDMobile and GiffGaff. I'm looking at both brands to see where we can get ideas for a business plan. The primary goal of this study is to identify the brand that is most socially active and whether or not that social activity benefits their business. We will then use the winning brand's ideas for our next round of innovative business strategies(MINTEL, 2023).

The UK-based mobile network provider Giffgaff is renowned for its flexible plan options and community-driven philosophy. It was established in November 2009 and uses the O2 network infrastructure to function as a Mobile Virtual Network Operator(Wikipedia, 2022).

Based in the UK, iD Mobile is a mobile virtual network operator. In May 2015, Dixons Carphone, a major consumer electronics shop in Europe, introduced it. iD Mobile serves its clients with 4G and 5G services by utilizing the Three network infrastructure (Wikipedia, 2024).

Chapter – 2

2.1 Design and Discussion

Social media data is the most extensive and dynamic data source in the modern era. Social media platform data is the new resource for researching human behaviour. In our modern generation, where technology is the key to almost every kind of work, scientists and programmers are finding and evaluating numerous techniques of automatically collecting, combining, and analysing the data (Dwivedi et al., 2021). This article collects and analyse data using a variety of tools, methods, and API. Let's quickly examine the tools that were utilized:

2.1.1 Data Miner

Users can collect data from websites and store it in Excel spreadsheets by using the Data Miner and Scraper Google Chrome extension from Chrome Web-Store. In simple words, it transforms unstructured HTML data into a structured tabular form (chromewebstore.google.com, n.d.). Data Miner and Scraper are used in this project to extract the Trustpilot reviews and ratings and time which is posted.

2.1.2 Python – IDE

Python is a very effective and versatile programming language that is widely utilized by scientists and developers worldwide. Python is able to interact with a wide range of servers. Python is used by data scientists for a variety of tasks, such as storing the retrieved data in a database, analysing, and forecasting. For interactive use, the script and console are divided into multiple windows. A help pane featuring a subject search is also included. It provides a logical method for creating and managing projects, and writing and running scripts in it is quite simple(Melanie, 2024). It is utilized in this work to extract data from Youtube comments and GiffGaff and iD-Mobile statistics, saving the results to an Excel spreadsheet.

2.1.3 Microsoft Excel

Excel spreadsheets are the most popular format and are used by businesses of all kinds. Some basic math procedures are highly helpful to a data analyst. As data analysts, we are able to format, filter, and sort the data. Tables and charts can also be made with Excel (Excel-easy.com, 2010). For this study, Excel has served as my data source. I've saved the scraped data for cleaning and have used the cleansed data for visualization.

2.1.4 Tableau

Tableau is an interactive data visualization tool that enables you to create relevant and interesting worksheets and dashboards to obtain company insights for improved development. It facilitates creating customized dashboards that provide insight into a variety of data sets easy for non-technical individuals (Tableau, n.d.). For my research report, I utilized Tableau to visualize the data into relevant visualizations. I've compared the social media followings of the two stations using side-by-side bars, Facebook comments, likes, and reactions, and bar graphs for YouTube comments for semantic analysis.

2.1.5 Google-Colaboratory

Without requiring any further setup or administration, Google Colaboratory, often known as Google Colab, is a free cloud-based platform that lets users develop and run Python code through a web browser. It provides an interactive workspace known as a "notebook," where users may generate and distribute documents with narrative text, equations, live code, and visualizations.

Google Colab's smooth notebook sharing and storage is made possible by its integration with Google Drive, one of its primary advantages. Furthermore, Colab gives customers access to strong processing resources like GPU and TPU accelerators, enabling them to perform resource-intensive tasks like data analysis and machine learning(Google, n.d.).

2.1.6 Shared Count

To help users learn more about how well their content performs on social networking, Shared-Count is an online tool. By entering a URL, users may find out how often a piece of content has been shared on various websites, including Facebook, Twitter, Pinterest, and others. With the help of Shared-Count's enlightening analytics, users can keep an eye on the influence and audience(Erickson and Atchison, n.d.).

2.1.7 Youtube API

The YouTube API allows developers to link YouTube with websites and applications by providing them with access to the vast YouTube collection of videos, channels, and playlists. Developers can personalize their platforms and enhance user experiences by adding features like video search, statistics retrieval, and content posting. In this paper the common API key is being generated from Google Developer Console and channel ID is being scraped and implemented in Python code(Pranayteja, 2023).

2.1.8 Azure Machine Learning – Sentiment Analyser Tool

With the Azure Machine Learning add-ins for Excel, users may do sentiment analysis from within the program and derive valuable insights from text data. With tools like sentiment analysis and keyword extraction, users can gain deeper insights and make data-driven decisions without ever leaving the familiar Excel environment. In this paper I have used to classify the comments that is positive, negative and neutral with score analysis(Kmshilpamurali, 2023).

2.1.9 Word-Cloud – Text-Blob

With the goal of making text processing and analysis easier, Text-Blob is a robust Python toolkit for natural language processing (NLP) applications. For basic NLP tasks like sentiment analysis, part-of-speech tagging, noun phrase extraction, language translation, and more, it offers a straightforward and user-friendly API. Text-Blob is simple to use and extensible because it is based on the NLTK (Natural Language Toolkit) and Pattern libraries (Kozaczko, 2023).

2.2 Justification of Choice

The following tools are used to scrape and do the visualisations because it helps in scraping the relevant details which is needed for visualizations. Using Data Miner we can scrape the details which can be divided into recipes and can be scraped to which we are up-to do the visualizations. The next is the Shared Count website which is used to scrape the numeric values which gives a clear visualization on clear data. The python code used is simple which is used for scraping youtube comments that is simpler than any scraping tool. The justification is that for other scraping tool are to be paid or with less amount of features when compared to these tools mentioned. These tools are easy for beginners who starts their career with Tableau Visualizations.

Chapter – 3 - Workflow

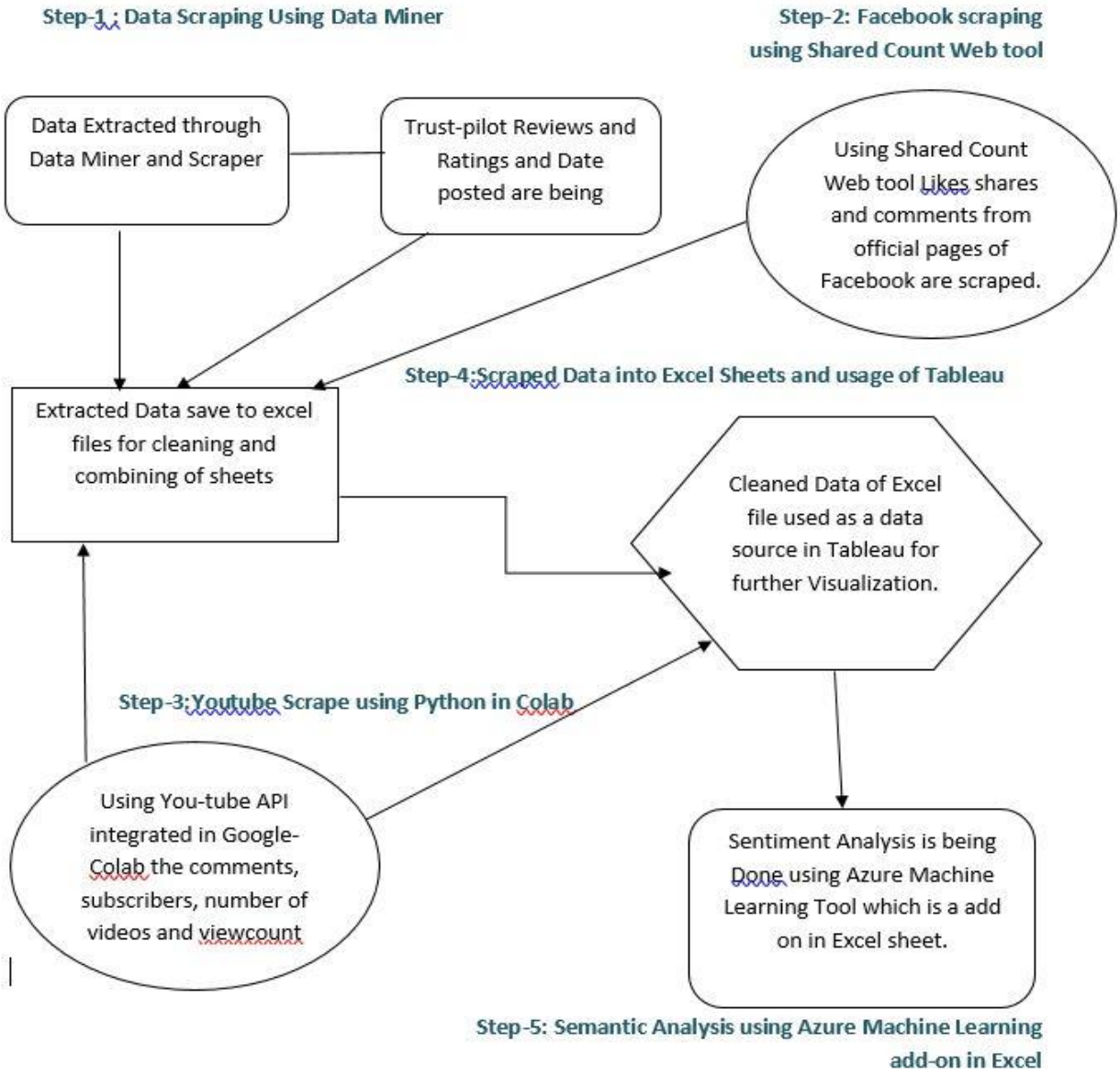


Figure 1-Workflow of Web scraping and Visualization in Tableau

Chapter – 4 -Visualization and key results

This chapter explains all the visualizations that is visualized using Tableau which is all done through data that is scraped from respective social media pages. It explains the difference of opinion between two mobile networks i.e., Giffgaff and iDMobile.In social media analytics, visualization is essential for combining important findings between GiffGaff and iDMobile on sites like Facebook, YouTube, and Trust-pilot. A variety of visualization approaches, including word clouds, line graphs, and bar charts, can be used to show patterns and trends in customer involvement.

Sentiment analysis: Graphics can show how each platform's provider's sentiment is distributed—positive, negative, or neutral. The percentage of positive, negative, and neutral opinions given by users on one of the social media i.e, YouTube can be seen in bar graph.

Engagement data: On Facebook and YouTube, visualizations can display data like reactions, shares, comments, and views. Both GiffGaff and iDMobile's engagement trends over time can be seen in bar graphs or , which gives valuable information of their services and offers and customer engagement on social media marketing initiatives.

Comparison : GiffGaff and iD-Mobile's performance can be compared between several software using side-by-side visualizations even with excel also. This allows for a thorough grasp of their social media attention towards the customers. Examples are sentiment range, involvement levels.

In order to better meet customer needs and enhance their brand perception, Giff-Gaff and iD-Mobile can benefit from the informed decision-making and strategic planning that can be facilitated by the effective display of social media analytics data from platforms such as YouTube, Facebook, and Trust-pilot (FutureLearn, n.d.).

4.1 Trust-pilot Visualizations

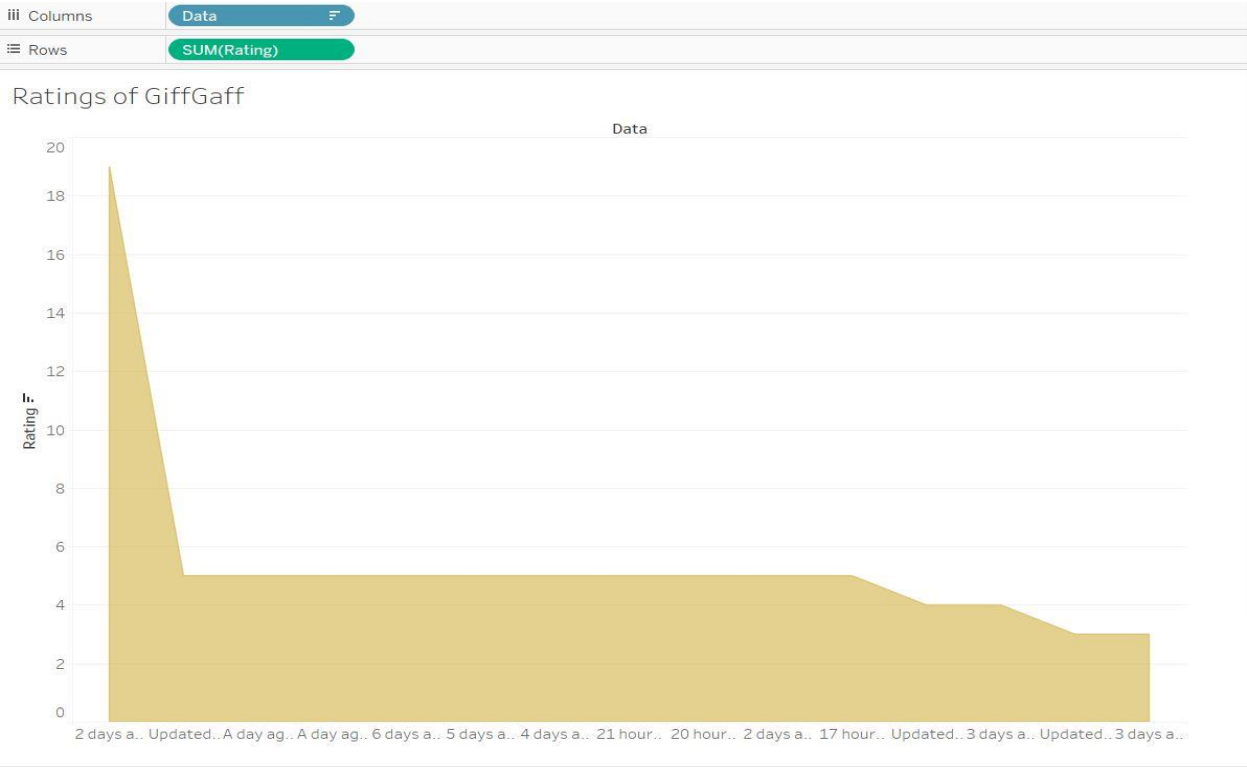


Figure 2-Ratings of GiffGaff on Trustpilot

Mobile network provider GiffGaff has established a solid reputation thanks to a number of review sites, most notably Trust-pilot. Trust-pilot reviews and ratings are frequently used as a key-point for overall service quality and customer satisfaction. Positive and negative comments coexist in GiffGaff's ratings, which demonstrate a wide range of user experiences.

Positive evaluations frequently emphasize Giff-Gaff's affordable prices, adaptable plans, and community-based assistance approach. Consumers value Giff-Gaff's offers for their simplicity and openness as well as their ability to tailor their plans to meet their own demands. Giff-Gaff's online community network, where users assist one another in troubleshooting problems, is also praised for its timeliness and effectiveness(Trustpilot, 2024).

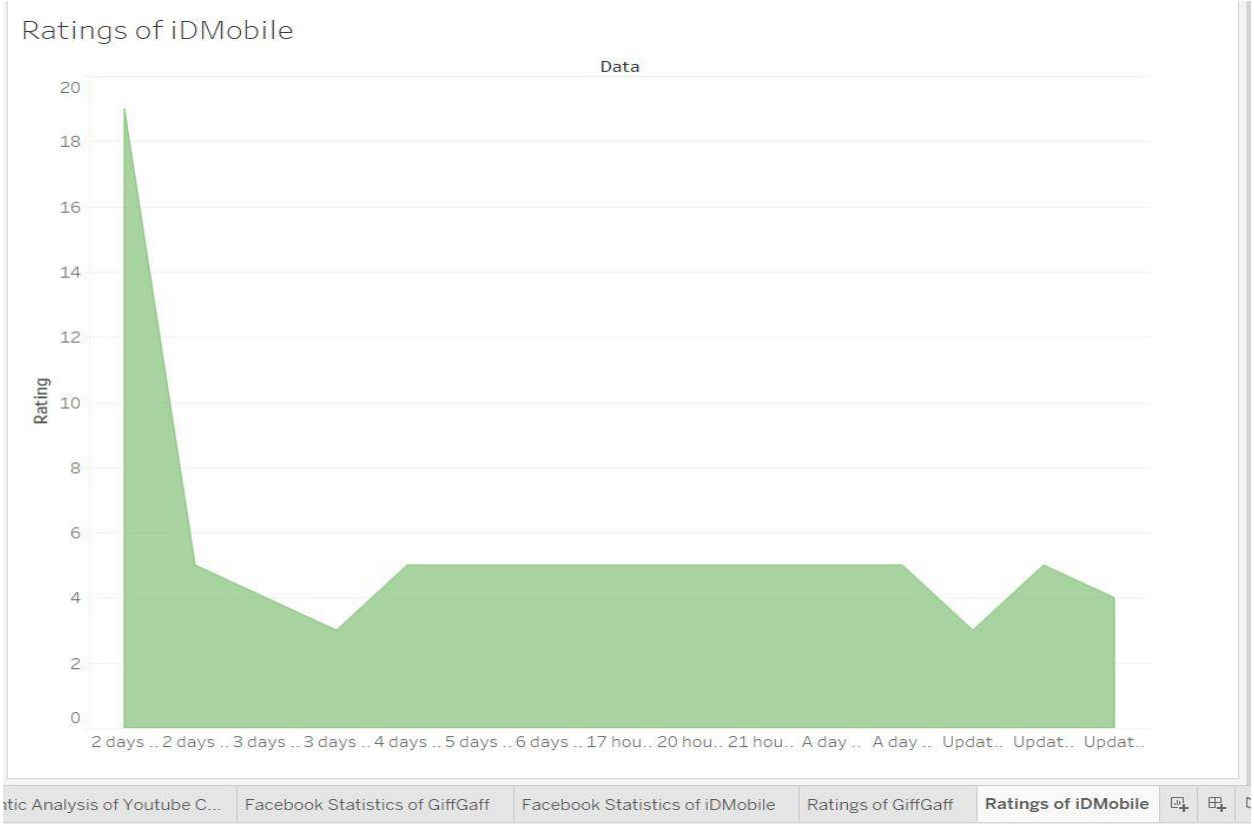


Figure 3-Ratings of iDMobile on Trustpilot

An overview of the total rating score, the number of reviews, and the distribution of ratings (such as 5-star, 4-star, etc.) says that there is fluctuation over the days which depicts that there is some poor service of over the network. Any noteworthy trends in the sentiment that customers have expressed, whether they are primarily favourable, negative, or mixed, may also be mentioned in the summary(Trustpilot, 2024). In addition, it might be mentioned any recent trends or modifications to the ratings to give context for how Trust-pilot users' impressions of iDMobile are changing because of its decreased output of range.

4.2 Facebook Visualizations

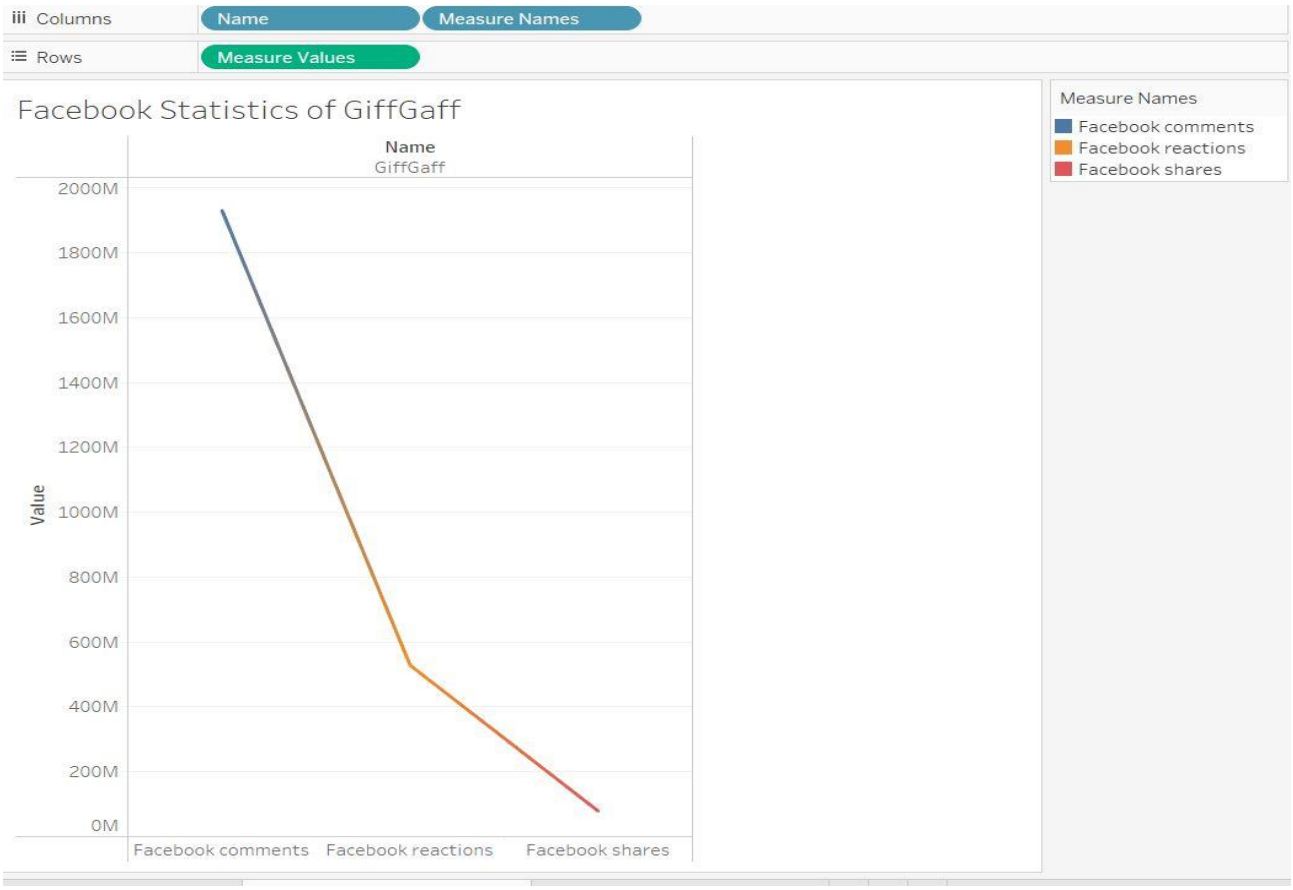


Figure 4-Facebook Statistics of GiffGaff

This elbow is blunt which depicts that there is equal range of shares reactions and comments with the GiffGaff. Within the field of social media analytics, GiffGaff's Facebook engagement metrics visualization provides insightful information about the online activity and customer interactions. This able to provide a detailed view of audience interaction by using Facebook visualization which concludes number the likes, reactions, and comments that GiffGaff's articles have received.

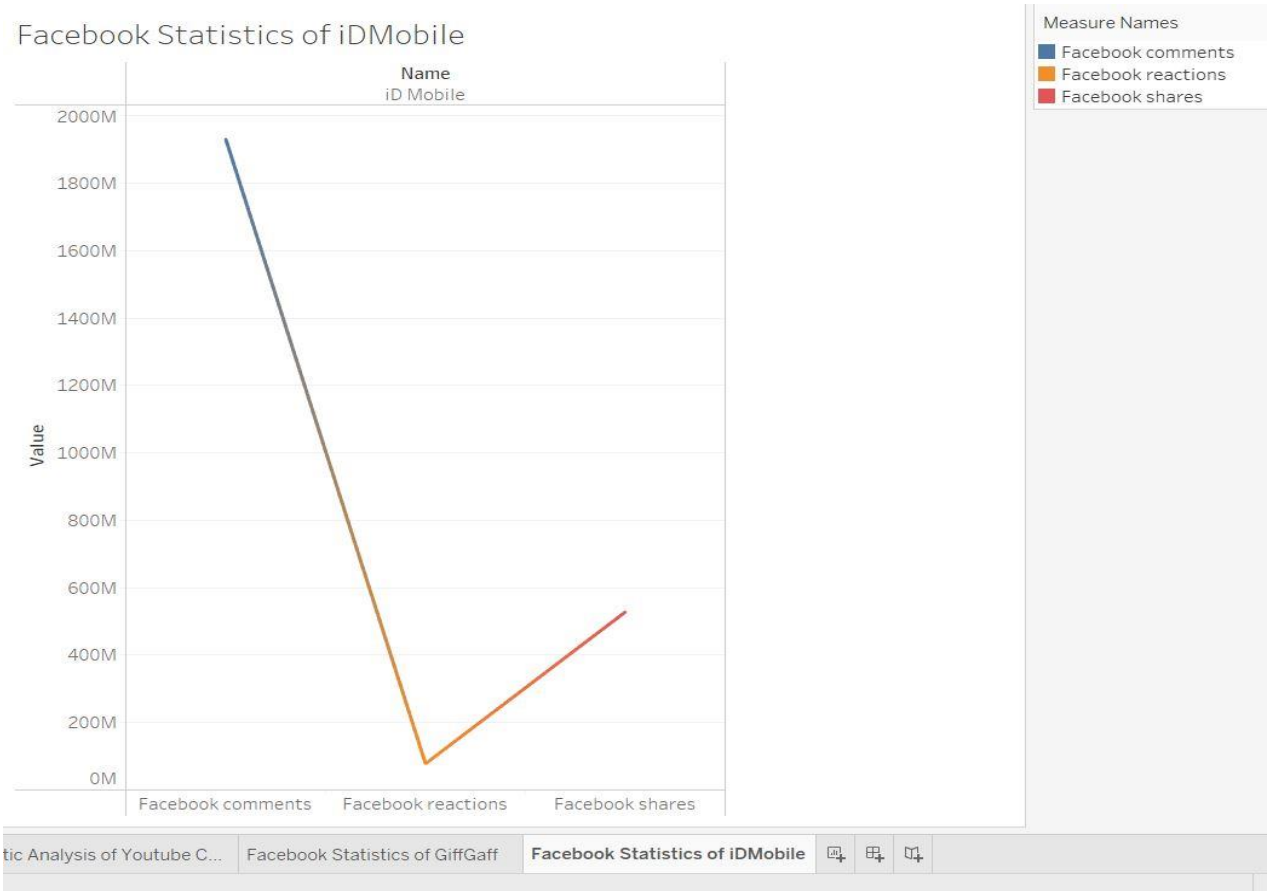


Figure 5-Facebook Statistics of iDMobile

This elbow is sharp and thus it depicts the low range of comments shares and reactions when compared to GiffGaff. The Facebook visualization for iDMobile provides useful information about the shares reactions and comments scraped from shared count website and interaction patterns of the audience on the network, allowing for data-driven choices that improve customer relations, brand image, and content strategy.

4.3 Youtube Visualizations

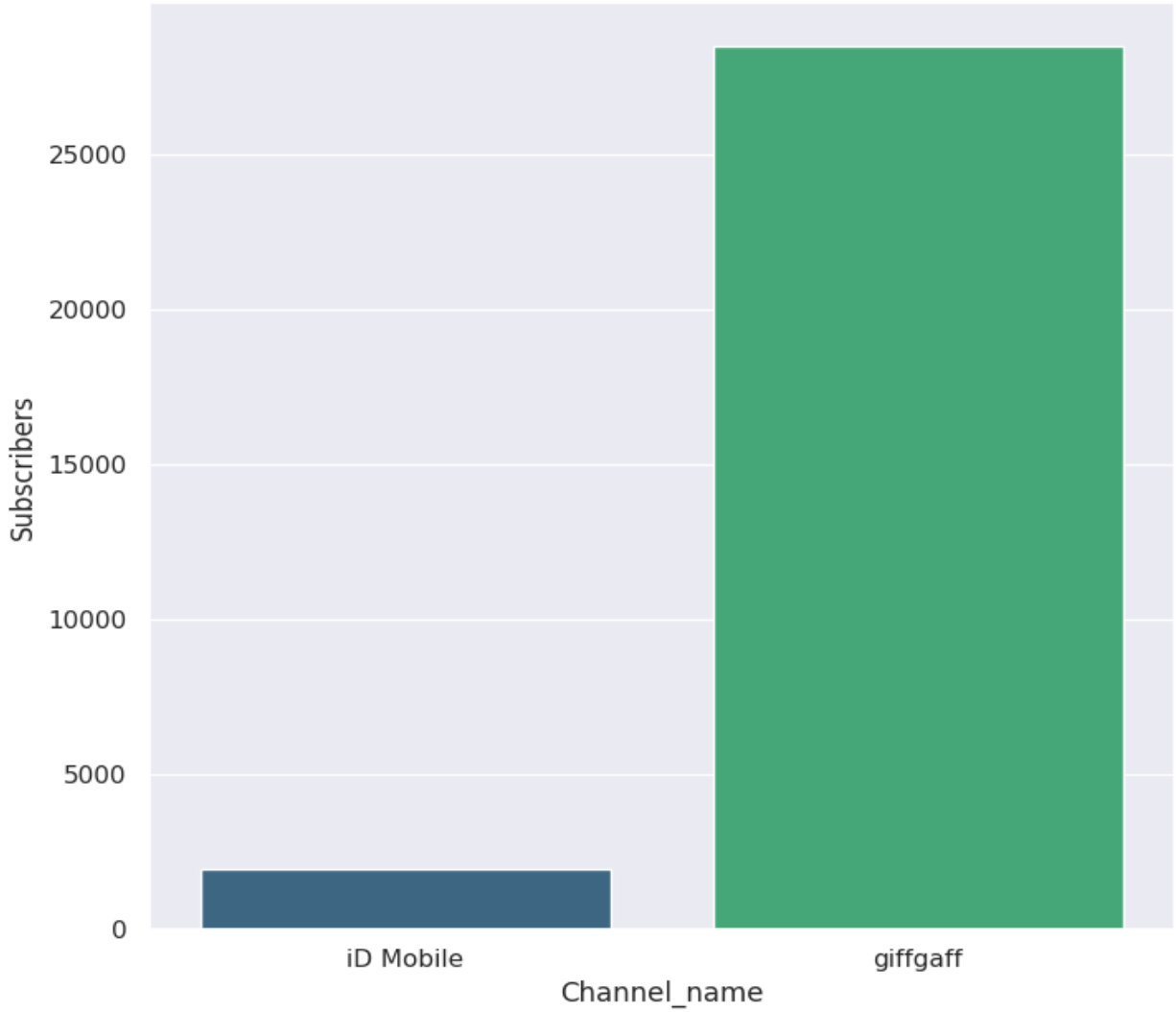


Figure 6-Followers on Youtube

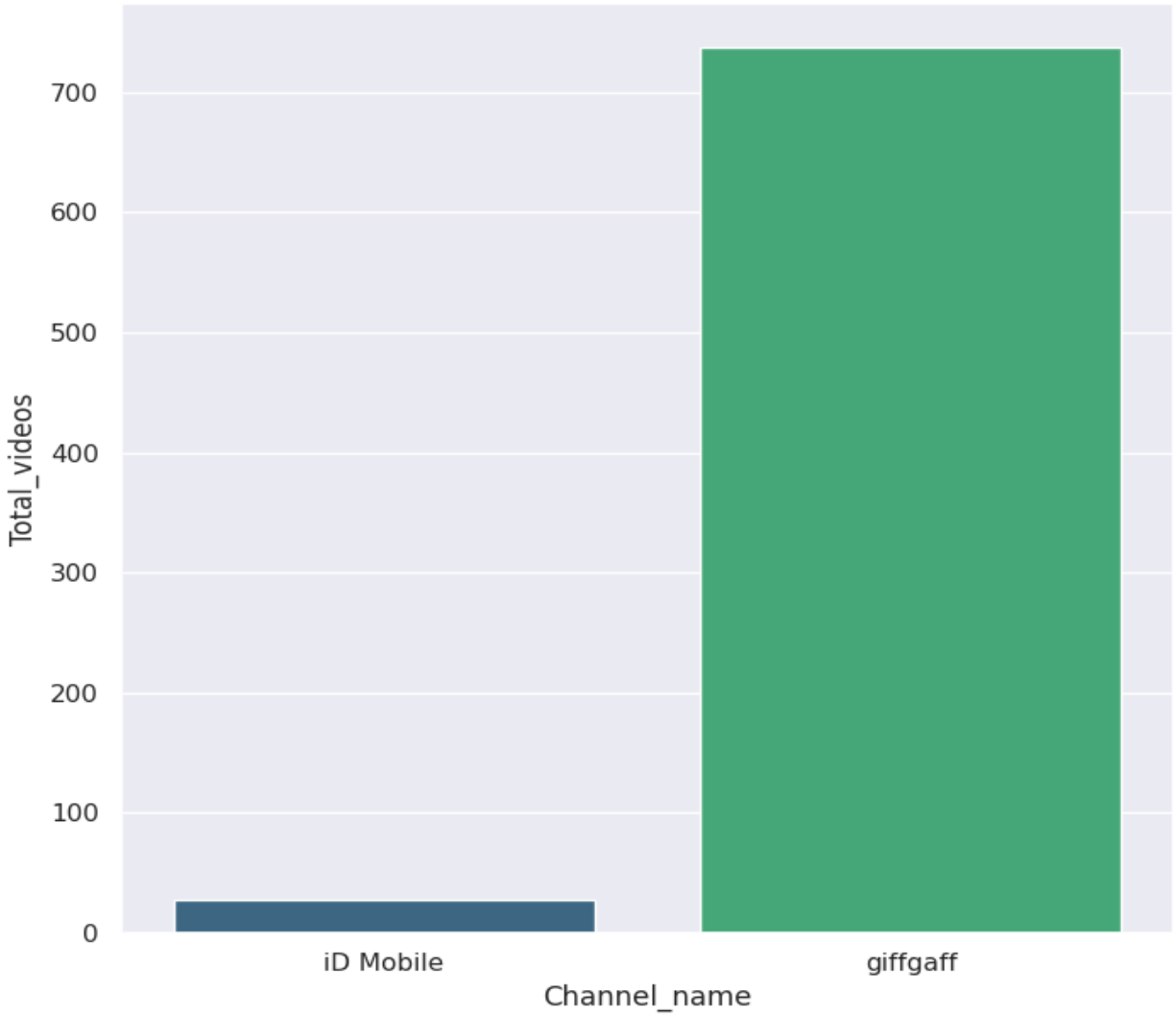


Figure 7-Total Videos Published in Youtube

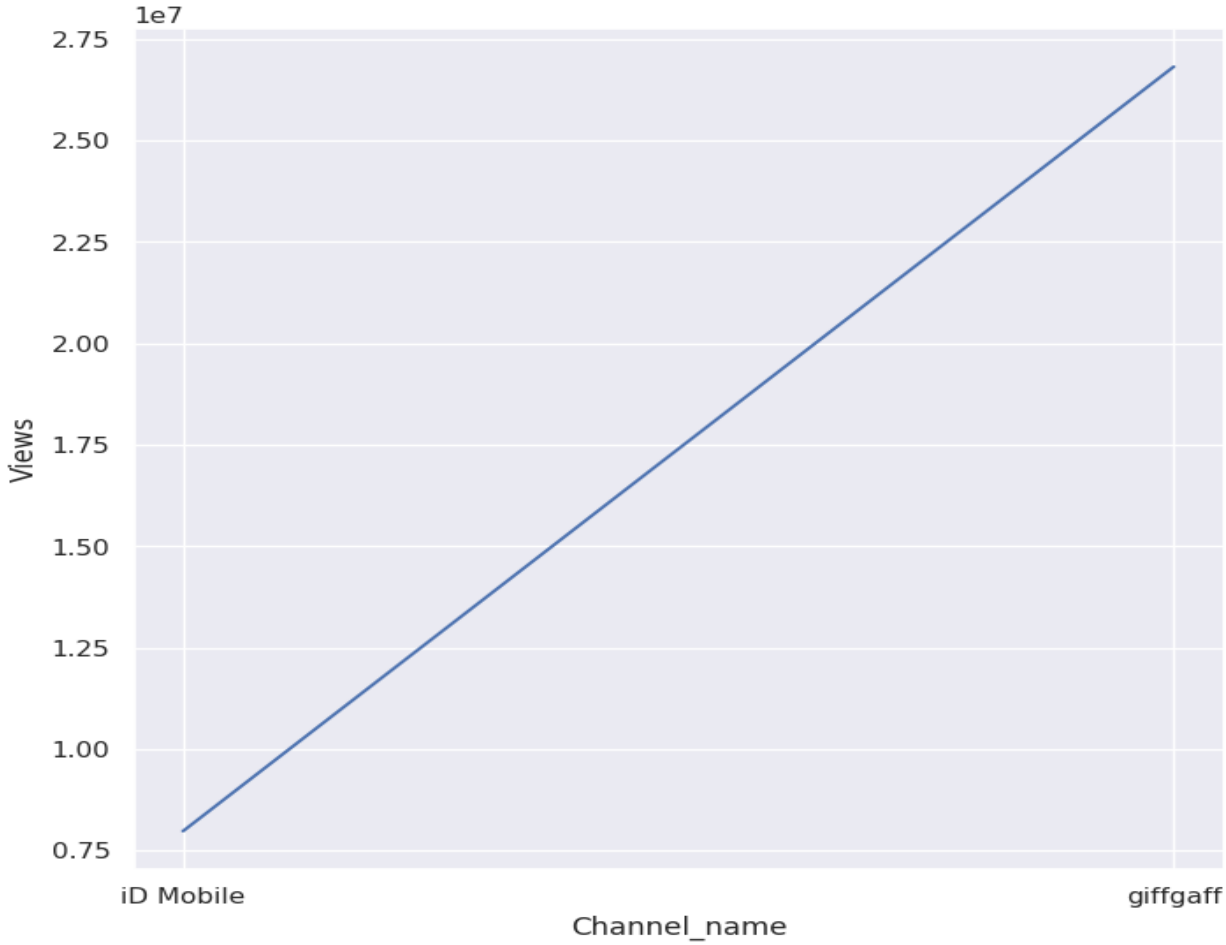


Figure 8- Total View Cout on Youtube

From the fig 6, 7, and 8 it is understood that there is a visible difference of more followers on GiffGaff than iDMobile. Which is much with all that of Viewcount and Total Videos published. There are 28500 followers on GiffGaff whereas 1920 followers on iDMobile. The view-count is established as 26820021 and 7981766 respectively. From all these analysis it is found that there are much influence on GiffGaff rather than iDMobile. This is the result of the business analytics which impact the business tactics of both the mobile network market. These visualizations or done using python code.

4.4 Sentiment Analysis

Sentiment analysis is a useful technique for drawing conclusions from text data that can be applied to help businesses better understand and react to consumer feedback, industry trends, and public sentiment in real time. Based on the attitudes and feelings expressed by their target audience, it enables organizations to improve their communication strategy, goods, and services and make well-informed decisions. The process of interpreting and comprehending the meaning of text data is called semantic analysis, sometimes referred to as text analytics or natural language comprehension. Interpretive analysis surpasses the mere examination of individual words or phrases and aims to grasp the meaning, relationships, and context of a written work(MonkeyLearn, n.d.)

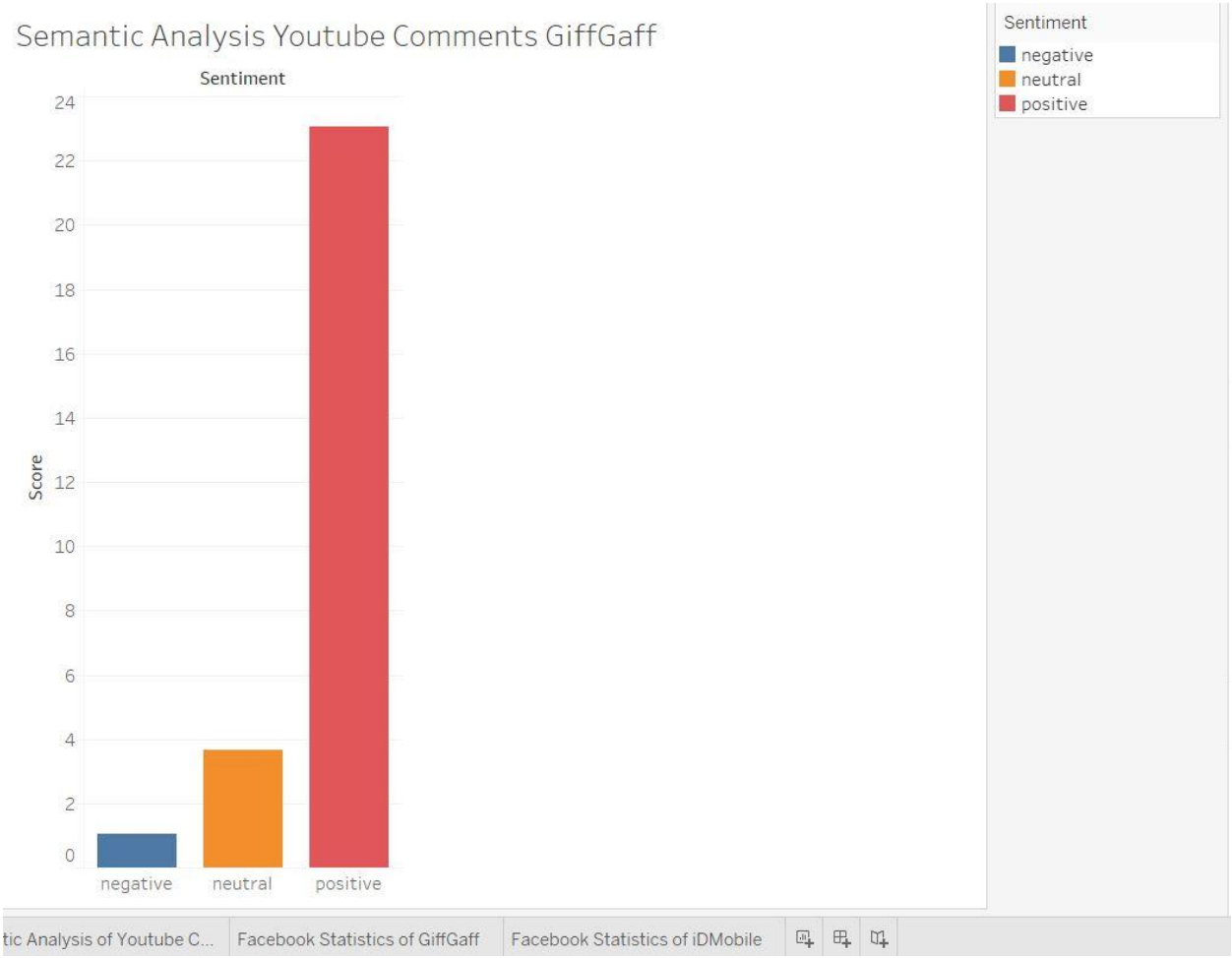


Figure 9-Sentiment Analysis on Youtube Comments of GiffGaff

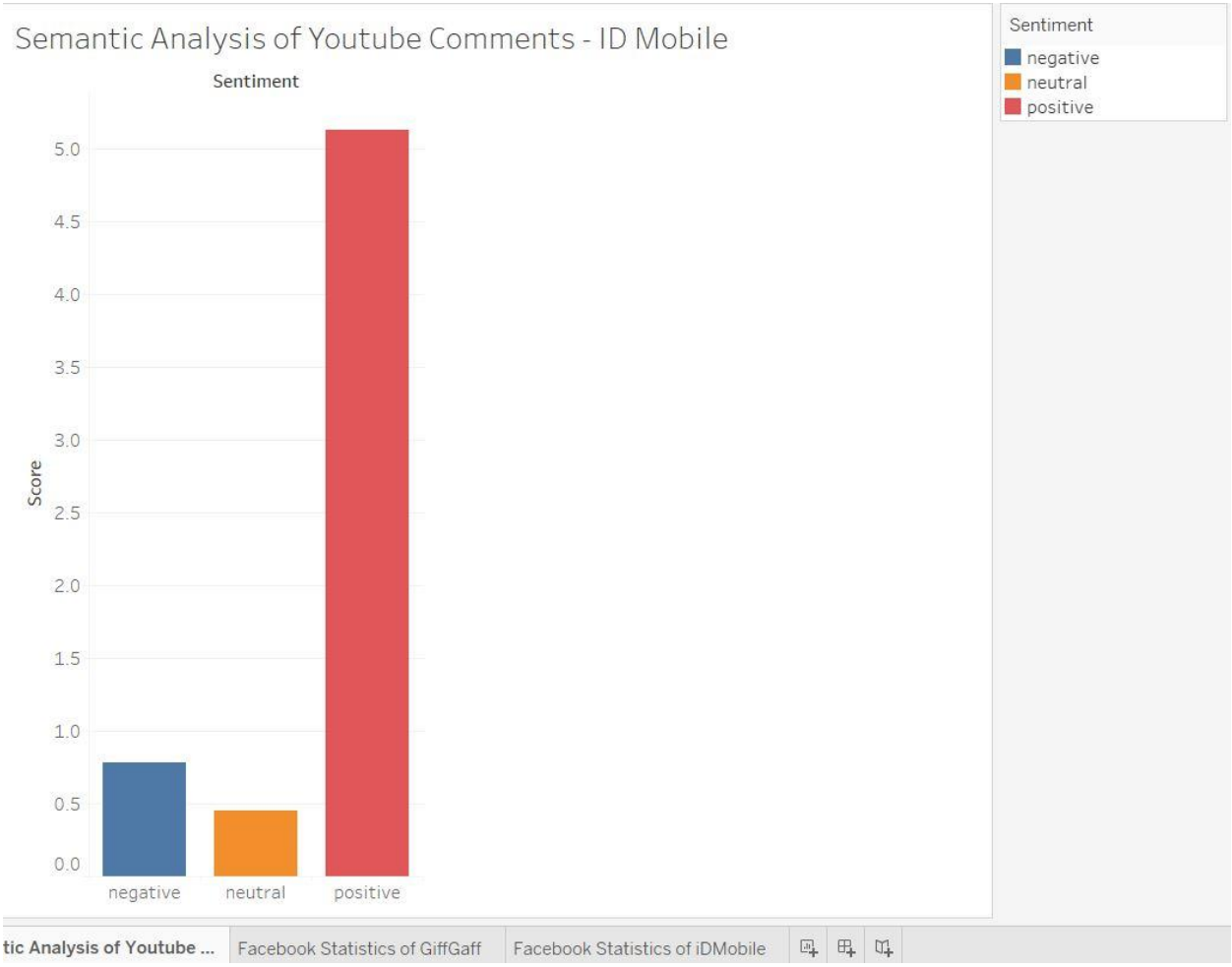


Figure 10-– Sentiment Analysis on Youtube Comments of iDMobile

The fig 9 and 10 depicts that the positive comments is more on both the images but the negative comments on iDMobile is more when compared to GiffGaff. This resource that there is equal range of neutral comments but the business tactics involves only in positive and negative comments not the neutral comments. Overall, sentiment analysis plays an important role which helps in strategical business development in Mobile market between GiffGaff and iDMobile.The categorization helps in viewing the positive feedback and employs in featuring new business tactics as well.

4.5 Word-Cloud Visualization

In social media analytics, word clouds are frequently used to display text data gathered from numerous social media platforms, including Facebook, Instagram, Twitter, and more. (Zachlod et al., 2022)They give rapid insights into the subjects, motifs, and opinions expressed by users by displaying the most common words and text analysis in attractive-manner.

Finding Key Topics: Word clouds is the rapid identification of the primary subjects of conversation within a dataset by displaying the most frequently occurring words and phrases in social media posts. This enables them to identify the most popular subjects among users and arrange them in descending order for more examination(Anon, n.d.).

Comparing Topics or Brands: To compare the frequency of mentions and related attitudes for various goods, brands, or topics, word clouds can be made. (Anon, n.d.). This aids analysts in determining areas of strength or weakness and how different brands are seen in relation to one another.

Tracking Campaigns: Word clouds can be created instantly to track the effectiveness of social media events, hashtag campaigns, and marketing efforts. (Anon, n.d.). To evaluate the effectiveness of their efforts and make necessary adjustments, analysts can monitor shifts in the sentiment and frequency of keywords over time.

Figure 11-Word-Cloud for GiffGaff and iD-Mobile

For GiffGaff and iDMobile, a word cloud visualization would offer a succinct overview of the most common words or phrases found in text data associated with these mobile service providers.

A word cloud for GiffGaff and iDMobile might draw attention to recurring themes, subjects, and attitudes that are brought up in client testimonials, remarks on social media, or promotional materials. For instance, recurring references to concepts like "pricing," "customer service," "network coverage," and "satisfaction" may point to important areas of concern or interest for clients.

In total, a word cloud for iDMobile and GiffGaff provides an good visualising depiction of the most talked subjects and attitudes related to both mobile service providers, in the extraction of important patterns and insights from textual data.

Chapter – 5

5.1 Project Limitations

- The outcomes of this research could alter in the future because the analyses are just for a limited time.
- The main drawback of this research is that the data sets tend to be lower in size and Data-Miner and Python code are used to extract the lowest quantity of data.
- Duplicate data is occasionally extracted using Data Miner and requires additional cleaning.
- When assessing attitudes, computer algorithms struggle to distinguish between things like jokes and sarcasm. It does not always exclude irrelevant feeling.
- Hashtags are not recognized by the Sentiments algorithm.
- Twitter data is difficult to extract using Data Miner, indicating that payment is required. Deriving the API key is similarly difficult.
- Facebook information is hard to extract which includes likes shares and comments and derivation of API key is also a bit challenging for both of twitter and this.

5.2 Recommendations

- To determine client sentiment and pinpoint areas for development, conduct sentiment analysis on a regular basis.
- To gain insight into audience interactions, track engagement data on websites such as Facebook, YouTube, and Trust-pilot.
- Examine the performance of rivals to compare it to industry norms and find areas where you may distinguish out. Present findings to stakeholders in a way that is understandable and practical by utilizing visualization approaches.

Conclusion

To sum up, social media analytics is essential for comprehending and improving GiffGaff and iDMobile's brand recognition and visibility in the fiercely competitive telecom sector. Through utilizing data from websites such as Facebook, YouTube, and Trust-pilot, these businesses can obtain important perceptions into consumer attitude, degree of participation.

They may pinpoint the strengths and weaknesses in their services via sentiment analysis, enabling focused enhancements to the client experience. It also provides insightful information about market trends, best practices, and areas for unique selling. GiffGaff and iDMobile can adjust their strategy to meet changing client expectations and stay competitive by monitoring the success of their competitors.

In the end, using visualization approaches improves the way insights are communicated to stakeholders, which helps with strategic planning and well-informed decision-making. GiffGaff and iDMobile can successfully traverse the ever-changing social media landscape, fortify consumer relationships, and propel corporate success in the digital era by employing a data-driven approach to social media analytics. Thus from these analysis it is found that GiffGaff has more customer response when compared to iDMobile.

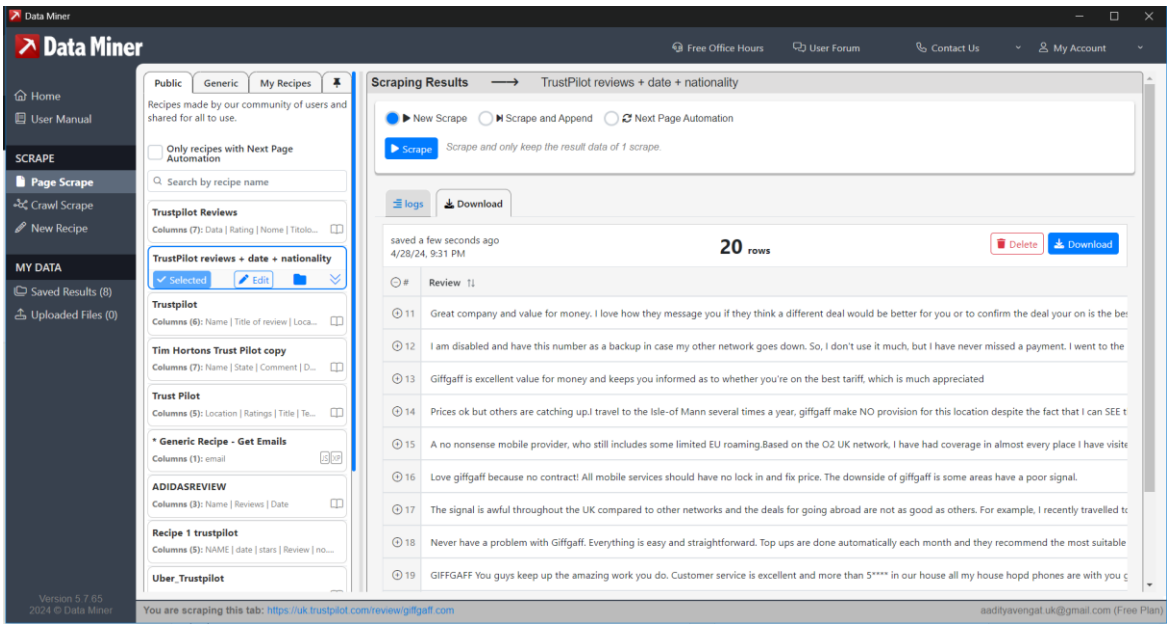
References

1. Trustpilot. (2024). *giffgaff is rated 'Great' with 4.1 / 5 on Trustpilot*. [online] Available at: https://uk.trustpilot.com/review/giffgaff.com [Accessed 30 Apr. 2024].
2. Anon, (n.d.). *Word Clouds & the Value of Simple Visualizations – Boost Labs*. [online] Available at: https://boostlabs.com/what-are-word-clouds-value-simple-visualizations/.
3. chromewebstore.google.com. (n.d.). *Data Scraper - Easy Web Scraping*. [online] Available at: https://chromewebstore.google.com/detail/data-scraper-easy-web-scr/nndknepjnldbdbepjfgmncbggmopgden.
4. Dwivedi, Y.K., Ismagilova, E., Hughes, D.L. and Carlson, J. (2021). Setting the Future of Digital and Social Media Marketing research: Perspectives and Research Propositions. International Journal of Information Management, [online] 59(1), pp.1–37. doi: https://doi.org/10.1016/j.ijinfomgt.2020.102168.
5. Erickson, B. and Atchison, J. (n.d.). *Shared Counts – Social Media Share Buttons*. [online] WordPress.org. Available at: https://wordpress.org/plugins/shared-counts/ [Accessed 30 Apr. 2024].
6. FutureLearn. (n.d.). *Case study: GiffGaff*. [online] Available at: https://www.futurelearn.com/info/courses/understanding-your-customers/0/steps/315122.
7. Kmshilpamurali (2023). *Sentiment Analysis in Excel with Azure Machine Learning*. [online] Medium. Available at: https://medium.com/@kmshilpamurali/sentiment-analysis-in-excel-with-azure-machine-learning-fd4471e1d8ca.
8. Kozaczko, D. (2023). *9 best Python NLP libraries*. [online] Sunscrapers. Available at: https://sunscrapers.com/blog/9-best-python-natural-language-processing-nlp/.
9. Lutkevich, B. (2021). What Is Social Media? [online] Techtarget. Available at: https://www.techtarget.com/whatis/definition/social-media.

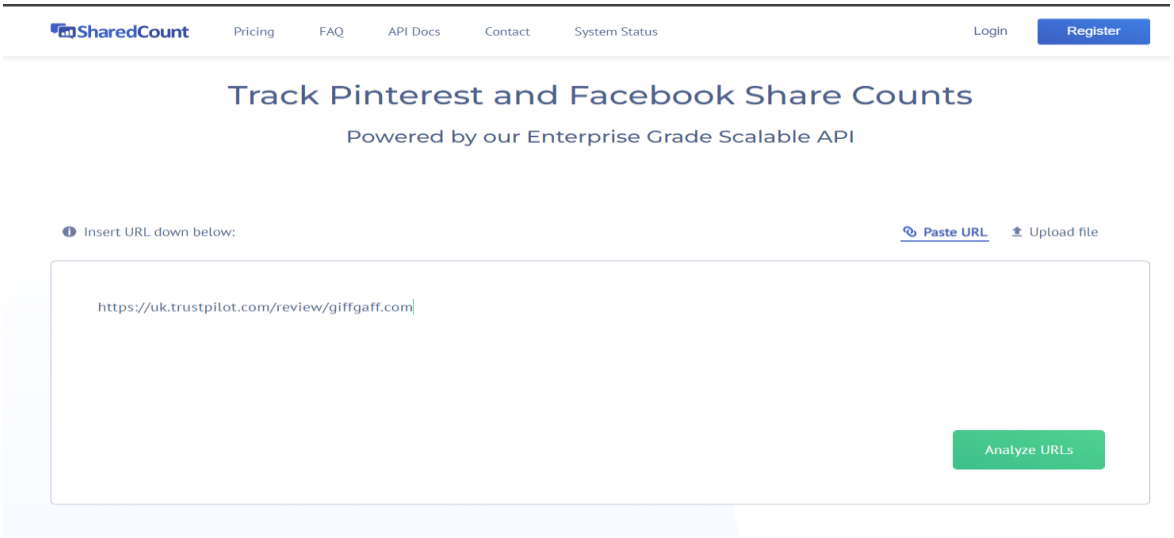
10. Melanie (2024). *Python 🐍: The most popular language*. [online] Data Science Courses | DataScientest. Available at: https://datascientest.com/en/python-the-most-popular-language.
11. MINTEL (2023). Social Media: Engaging with Brands - UK - 2022 : Consumer market research report | Mintel.com. [online] Mintel Store. Available at: https://store.mintel.com/report/uk-social-media-engaging-with-brands-market-report
12. MonkeyLearn. (n.d.). *Everything There Is to Know about Sentiment Analysis*. [online] Available at: https://monkeylearn.com/sentiment-analysis/#:~:text=Sentiment%20analysis%20(or%20opinion%20mining.
13. Pranayteja (2023). *YouTube Comments Sentiment Analysis using YouTube Data API v3*. [online] Medium. Available at: https://medium.com/@pranayteja270/youtube-comments-sentiment-analysis-using-youtube-data-api-v3-bf4a2a041144 [Accessed 30 Apr. 2024].
14. Wikipedia. (2022). giffgaff. [online] Available at: https://en.wikipedia.org/wiki/Giffgaff.
15. Wikipedia. (2024). iD Mobile. [online] Available at:https://en.wikipedia.org/wiki/ID_Mobile [Accessed 30 Apr. 2024].
16. Zachlod, C., Samuel, O., Ochsner, A. and Werthmüller, S. (2022). Analytics of social media data – State of characteristics and application. *Journal of Business Research*, 144(0148-2963), pp.1064–1076. doi:https://doi.org/10.1016/j.jbusres.2022.02.016.

Appendices

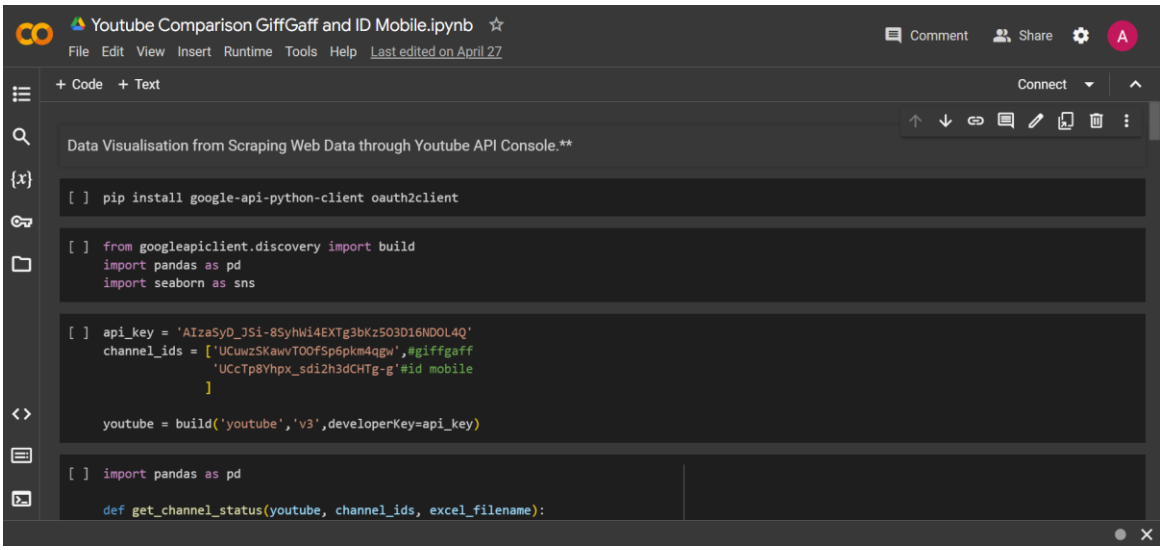
A1. Data Miner



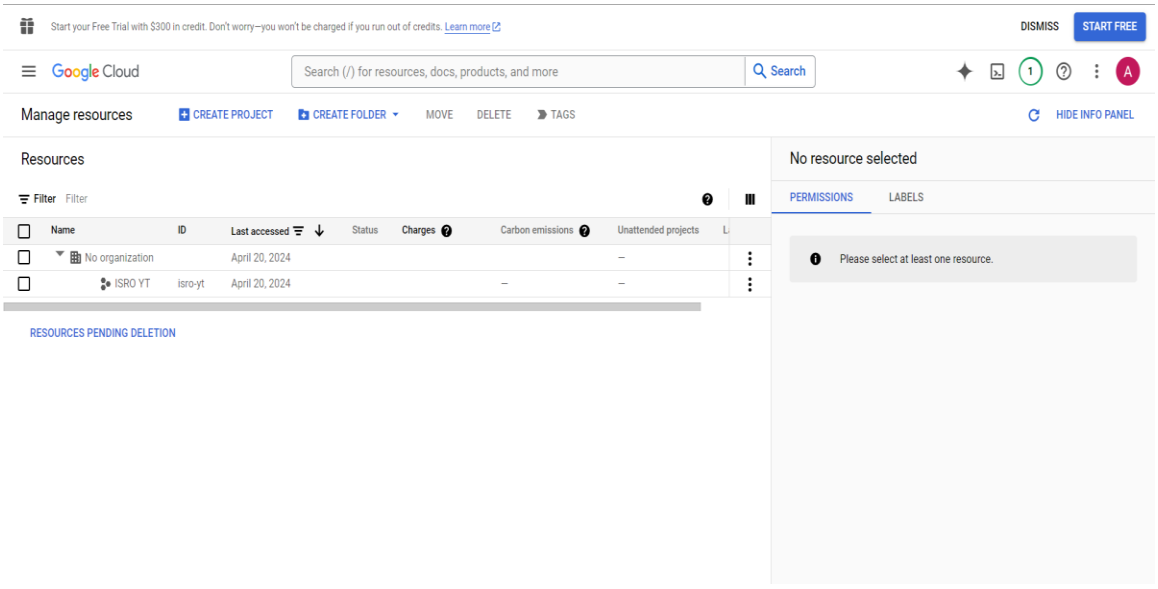
A2. Shared-Count Web Tool



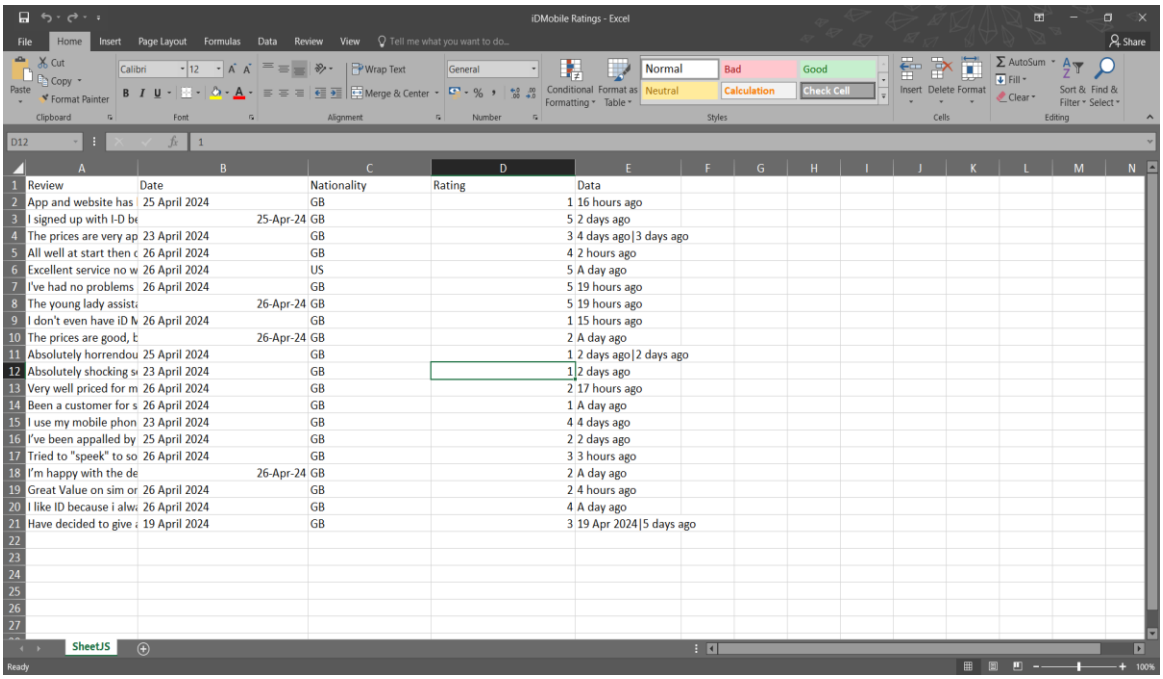
A3. Python – Google Colaboratory



A4.Google Developer Console – Youtube API

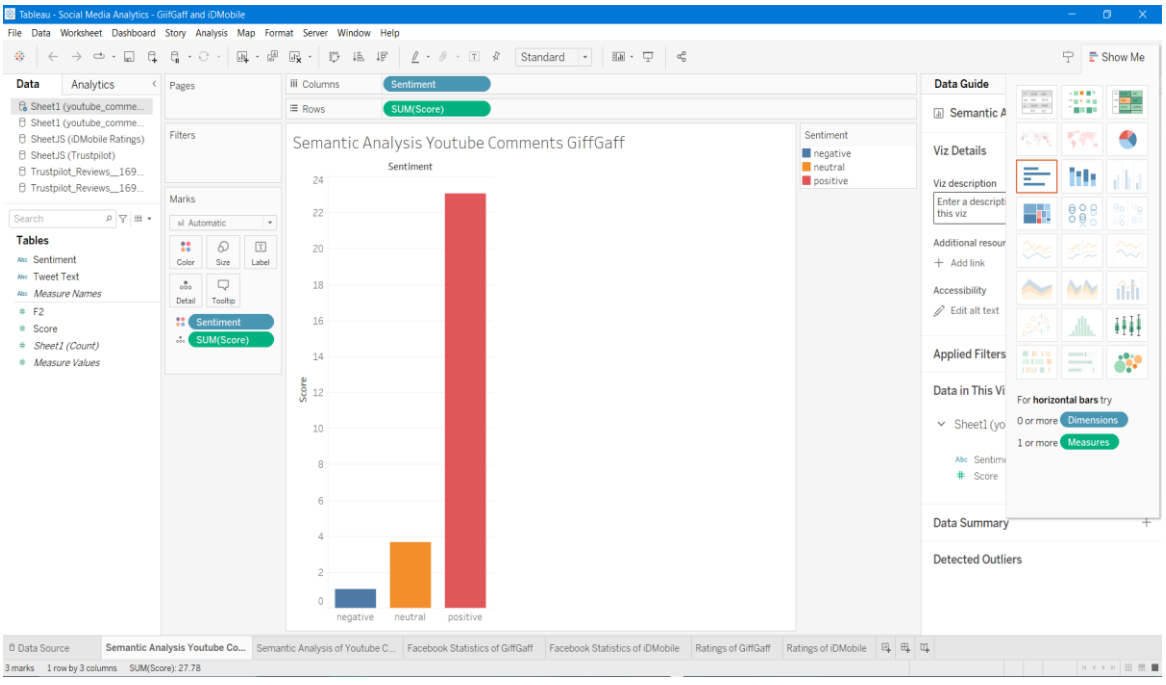


A5.Microsoft Excel

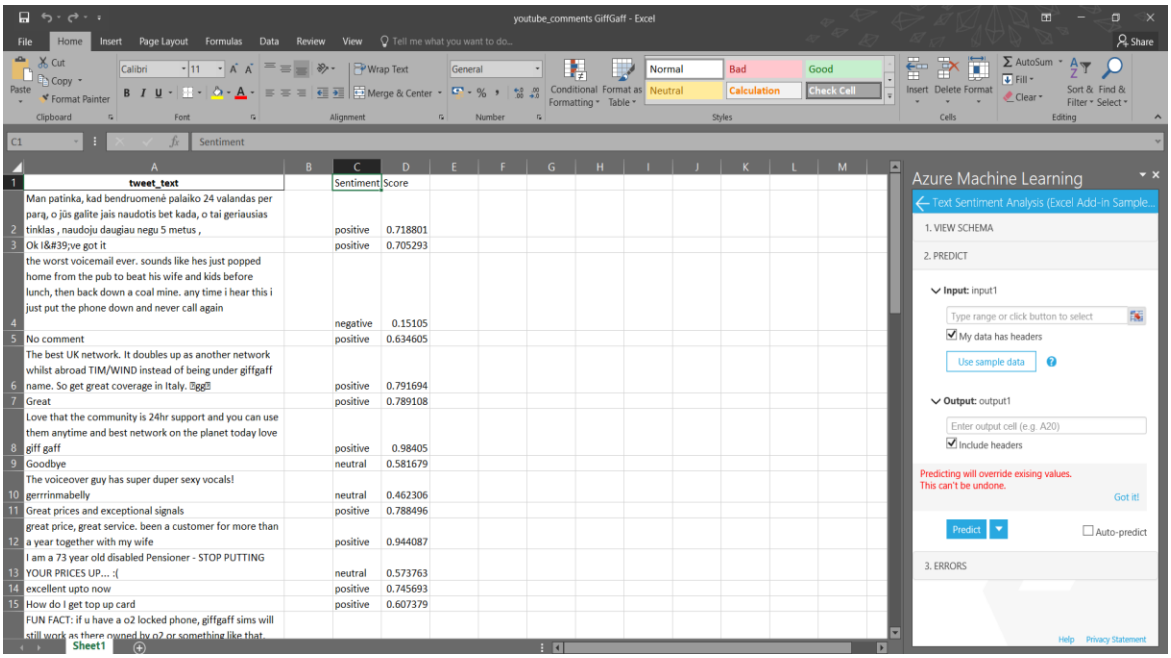


	A	B	C	D	E
1	Review	Date	Nationality	Rating	Data
2	App and website has	25 April 2024	GB	1	16 hours ago
3	I signed up with I-D be	25-Apr-24	GB	5	2 days ago
4	The prices are very ap	23 April 2024	GB	3	4 days ago|3 days ago
5	All well at start then c	26 April 2024	GB	4	2 hours ago
6	Excellent service no w	26 April 2024	US	5	A day ago
7	I've had no problems	26 April 2024	GB	5	19 hours ago
8	The young lady assista	26-Apr-24	GB	5	19 hours ago
9	I don't even have iD M	26 April 2024	GB	1	15 hours ago
10	The prices are good, b	26-Apr-24	GB	2	A day ago
11	Absolutely horrendou	25 April 2024	GB	1	2 days ago|2 days ago
12	Absolutely shocking se	23 April 2024	GB	1	2 days ago
13	Very well priced for m	26 April 2024	GB	2	17 hours ago
14	Been a customer for s	26 April 2024	GB	1	A day ago
15	I use my mobile phon	23 April 2024	GB	4	4 days ago
16	I've been appalled by	25 April 2024	GB	2	2 days ago
17	Tried to "speek" to so	26 April 2024	GB	3	3 hours ago
18	I'm happy with the de	26-Apr-24	GB	2	A day ago
19	Great Value on sim or	26 April 2024	GB	2	4 hours ago
20	I like ID because i alwa	26 April 2024	GB	4	A day ago
21	Have decided to give i	19 April 2024	GB	3	19 Apr 2024|5 days ago

A6. Tableau



A7. Azure Machine Learning – Semantic Analyser



	tweet_text	Sentiment	Score
2	Man patinka, kad bendruomenė palaiko 24 valandas per parą, o jūs galite jais naudotis bet kada, o tai geriausias tinklas , naudoju daugiau negu 5 metus ,	positive	0.718801
3	Ok I've got it	positive	0.705293
4	the worst voicemail ever. sounds like hes just popped home from the pub to beat his wife and kids before lunch, then back down a coal mine. any time i hear this i just put the phone down and never call again	negative	0.15105
5	No comment	positive	0.634605
6	The best UK network. It doubles up as another network whilst abroad TIM/WIND instead of being under giffgaff name. So get great coverage in Italy.	positive	0.791694
7	Great	positive	0.789108
8	Love that the community is 24hr support and you can use them anytime and best network on the planet today love giff gaff	positive	0.98405
9	Goodbye	neutral	0.581679
10	The voiceover guy has super duper sexy vocals! gerrrinmabelly	neutral	0.462306
11	Great prices and exceptional signals	positive	0.788496
12	great price, great service. been a customer for more than a year together with my wife	positive	0.944087
13	I am a 73 year old disabled Pensioner - STOP PUTTING YOUR PRICES UP... :(	neutral	0.573763
14	excellent upto now	positive	0.745693
15	How do I get top up card	positive	0.607379
	FUN FACT: if u have a o2 locked phone, giffgaff sims will still work as there owned by o2 or something like that.		

A8. Microsoft Teams – Recording Session Week-11

https://outlookuwicac-my.sharepoint.com/:v:/g/personal/sm24505_cardiffmet_ac_uk/EXaDMSpedf9Lu--d_zZWHlEBXobfjqE9EdhlKxaDf6-qUw