

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Informatics



Diploma Thesis

**Benefits and drawbacks of business promoting through
social media**

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

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Benefits and drawbacks of business promoting through social media

Objectives of thesis

The main objective of this thesis is to conduct a case study focused on promotion of a business through social media.

The partial goals of the thesis are such as following:

- To make a comprehensive literature review of the current state of the art in social media marketing.
- To evaluate a current state of social media marketing in the given organisation.
- To propose a new optimised social media marketing strategy and make an evaluation.

Methodology

The methodology of this thesis is based on the desk research of the secondary sources and literature. A primary data will be obtained from the selected organisation via an interview and survey. The practical part will use scientific methods such as analysis, synthesis, comparison and deduction. Following on the results of the literature review and the findings in the practical part, final recommendations and conclusion will be formulated.

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Social media, Business, Internet, Marketing, analytics.

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Eunice Mukolwe, Dr. Jacqueline Korir August 2016. Social Media and Entrepreneurship: Tools, Benefits, and Challenges. A Case Study of Women Online Entrepreneurs on Kilimani Mums Marketplace on Facebook Vol. 6, No. 8;

Shabnoor Siddiqui, Tajinder Singh. 2016, Social Media its Impact with Positive and Negative Aspects, Volume 5– Issue 2, 71 – 75, 2016, ISSN:- 2319–8656

Uchechi Cynthia Ohajionu, and Dr. Soney Mathews, 2015. ADVERTISING ON SOCIAL MEDIA AND BENEFITS TO BRANDS, Vol. 10, No. 2 (2015) 335-351 ISSN: 1823-884x

Wu He, Feng-Kwei Wang,, et al, 5 July 2015. An exploratory investigation of social media adoption by small businesses.

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Declaration

I declare that I have worked on my diploma thesis titled "Benefits and drawbacks of using social media to promote business" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any other person.

In Prague on 06.04.2020

Aishat Abdul

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Benefits and drawbacks of business promoting through social media

Abstract

The theoretical part of the research consists of the literature review which support the meaning of social media, the different social media channels, the importance of using social media to promote business, the methods used the advantages and disadvantages of using social media to promote business. Also, Lyft was selected as the case study business. Furthermore, this study shows the analysis of Lyft's Twitter timeline which is the social media channels that is actively used by the company. This study fetched its primary data through Twitter's API of 155 recent tweets published by Lyft, this data serves as the starting point to deduce the Twitter page's audience reactions based on type of tweet and the number of retweets.

This study shows that, advert-like tweet types such as announcement of promotions, discounts and several offers by Lyft are the most engaging tweet type followed by entertainment-like tweet types. This study proposed that businesses should use celebrities who are social media influencers to announce advert-like content through their social media platform, this could increase return on investment (ROI) as audiences are more interested in advert-like and entertainment-like contents.

Keywords: Social media, Facebook, Instagram, twitter, API, Digital marketing, SEO, Google analytics, ANOVA, Lyft, rideshare.

Výhody a nevýhody propagace podnikání prostřednictvím sociálních médií

Abstrakt

Teoretická část výzkumu se skládá z literární rešerše, která podporuje význam sociálních médií, různé kanály sociálních médií, význam používání sociálních médií k propagaci podnikání, metody využívají výhod a nevýhod používání sociálních médií k podpoře podnikání. Jako obchod pro případovou studii byla také vybrána Lyft. Tato studie dále ukazuje analýzu časového rozvrhu společnosti Lyft na Twitteru, což jsou kanály sociálních médií, které společnost aktivně využívá. Tato studie přinesla svá primární data prostřednictvím Twitteru API 155 nedávných tweetů publikovaných společnostmi Lyft. Tato data slouží jako výchozí bod k odečtení reakcí publika publika na Twitteru na základě typu tweetu a počtu opakování.

Tato studie ukazuje, že typy tweetů podobných reklamám, jako je oznámení o akcích, slevách a několika nabídkách společnosti Lyft, jsou nejpoutavějším typem tweetu, po kterém následují typy zábavy podobné typu tweet. Tato studie navrhuje, aby podniky používaly celebrity, kteří ovlivňují sociální média, k ohlašování reklamního obsahu prostřednictvím své platformy sociálních médií, mohlo by to zvýšit návratnost investic (ROI), protože diváci se více zajímají o obsah podobný reklamě a zábavě.

Klíčová slova: Sociální média, Facebook, Instagram, twitter, API, Digitální marketing, SEO, Google Analytics, ANOVA, jízda na koni.

Table of content

1 Introduction	12
2 Objectives and Methodology	13
2.1 Objectives.....	13
2.2 Methodology	13
3 Literature Review	14
3.1 Social media	14
3.2 Social media channels	14
3.2.1 Facebook.....	14
3.2.2 Instagram	15
3.2.3 Twitter.....	15
3.2.4 LinkedIn.....	15
3.2.5 YouTube	15
3.2.6 Blog.....	16
3.2.7 Snapchat.....	16
3.3 Importance of promoting business through social media	16
3.4 Methods of promoting business using social media	17
3.5 Impact of promoting business through social media.....	17
3.5.1 Advantages of promoting business through social media	18
3.5.1.1 Uses of social media for search engine optimization	18
3.5.2 Disadvantages of promoting business through social media	18
3.6 Benefits of using social media for promoting business	21
3.7 Role of social media marketing.....	22
3.8 Evaluation of social media promotion of business.	22
3.9 Digital marketing in business.....	22
3.9.1 The important and benefits of digital marketing	22
3.9.1.2 Disadvantages of digital marketing	23
3.9.1.3 Digital marketing Channels	24
3.10 About Lyft Company	25
3.10.1 Usage of Social Media by Lyft company	25
3.10.2 Evaluation of Lyft social media.....	26
3.11 Social media page map/layout	26
3.11.1 Facebook.....	26
3.11.2 Twitter.....	27
3.11.3 Instagram	28
3.12 Social media team	28

3.12.1	Social media head	29
3.12.2	Social media content developer	29
3.12.3	Social media community manager	29
3.12.4	Social media Advertiser	30
3.12.5	Social media analyst	30
3.12.6	Social media graphic designer/ video editor	30
3.12.7	Social media influencer manager	31
3.13	Social media campaigns	31
3.13.1	Setting Social media campaign for Lyft	31
3.13.2	Building a social media campaign	31
3.13.3	Social media campaign best practices	32
3.14	Lyft Performance report from Analytics compare to Uber	32
3.14.1	Realtime	32
3.14.2	Audience	34
3.14.3	Acquisition:	36
3.14.4	Behaviour:	37
3.14.5	Conversions:	37
3.15	Lyft Corporate Social Responsibility (CSR)	38
3.15.1	Round-up and Donate Program	38
3.15.2	Lyftup Program	39
3.15.3	Grocery Access Program	39
3.15.4	Vote Access Program	39
3.15.5	Disaster Response Program	39
4	Practical part using Lyft company as a case study	40
4.1	Methods and data	40
4.2	Average number of posts published by Lyft across social media networks	40
4.2.1	Twitter	41
4.2.2	Facebook	41
4.2.3	Instagram	42
4.2.4	Accessing Twitter's Rest and Stream API	43
4.2.5	Fetching Lyft's recent tweets through Twitter's Rest and Stream API	44
4.2.6	Creating dependent and independent variables from <i>lyftdata</i>	45
4.3	ANOVA Methodology	47
4.3.1	Install ggplot2 R package and Import Data to R environment	47
4.3.2	Create Box plots and Interaction plot	47
4.3.3	Create a model and do the model diagnostics	49
4.3.4	Check the homogeneity of variance assumption	49
5	Results and Discussion	49

5.1	Quantitative Analysis	49
5.1.1	Create research hypothesis.....	50
5.1.2	Box plots of Lyft tweet data	50
5.1.3	Interaction plot of Lyft Tweet Data	57
5.1.4	Analysis of variance (ANOVA) table and model diagnostics	58
5.1.5	Check the homogeneity of variance assumption	59
5.2	Qualitative Analysis	63
5.2.1	SWOT Analysis	63
	Conclusion	64
6	References	65
6.1	Appendix	71

List of pictures

Figure 1	the dark side of social media functionality (Baccarella et al., 2018)	19
Figure 2	Lyft's Facebook page map	26
Figure 3	Lyft's Twitter page map.....	27
Figure 4	Lyft's Instagram page map	28
Figure 5	Graph showing the number of Lyft and Uber followers across all social media networks.....	34
Figure 6	Information of the Twitter app created for the purpose of this research	43
Figure 7	Boxplot showing the feedbacks of tweet types and number of retweets.....	52
Figure 8	Boxplot showing the feedbacks of advert tweet type and number of retweets	53
Figure 9	Boxplot showing the feedbacks of appreciation tweet type and number of retweets	53
Figure 10	Boxplot showing the feedbacks of charity tweet type and number of retweets ..	54
Figure 11	Boxplot showing the feedbacks of entertainment tweet type and number of retweets	54
Figure 12	Boxplot showing the feedbacks of innovation tweet type and number of retweets	55
Figure 13	Boxplot showing the feedbacks of motivation tweet type and number of retweets	55
Figure 14	Boxplot showing the feedbacks of politics tweet type and number of retweets ..	56
Figure 15	Boxplot showing the feedbacks of safety tweet type and number of retweets....	57
Figure 16	Boxplot showing the feedbacks of support tweet type and number of retweets ..	57
Figure 17	Interaction plot for the number of retweets, showing the interaction between tweet types and feedbacks.....	58
Figure 18	Analysis of variance (ANOVA) table of the Lyft tweet data.....	59
Figure 19	Diagnostic plots for our final model.....	60
Figure 20	Tukey multiple comparisons of means	62

List of tables

Table 4 Comparing audience insight performance between Lyft and Uber (Source: businessindex.sprinklr.com)	34
Table 1 Number of tweets posted by Lyft on its Twitter page	41
Table 2 Number of Facebook posts by Lyft on its Facebook page	41
Table 3 Number of Instagram posts by Lyft on its Instagram page	42
Table 5 First 5 recent Lyft tweets out of the 155 Lyft tweet fetched through Twitter API.	45
Table 6 First 5 out 155 Lyft tweet data derived from fetched Twitter API.....	46
Table 7 Table showing the values of information from box plot of Lyft data set	51

List of appendixes

Appendix 1 Raw Lyft Tweet Data fetched from Twitter's API.....	71
Appendix 2 Lyft Data with Tweet Category	95

1 Introduction

This research will be focusing on the analyzing the current state of social media usage of businesses using Lyft ride sharing company as a case study, previous studies about how social media has impacted businesses will be reviewed. This study will fetch the primary data to be analyzed from the social media channel that is more actively used by the case study business (Lyft), the social media channel will be selected by manual review of the average number of post published across all Lyft's social media platform, the primary data will be fetched from the social media channel that has the most activity.

For quality assurance purpose, the data will be fetched using Twitter's API to gain full access in fetching the exact data that would be the most relevant for this research study. All tweets fetched from Lyft's Twitter's timeline are categorized into different types, such as tweet relating to Advert, Entertainment, Safety, Politics, Charity, Support, Motivation, Appreciation and Innovation.

Fetching out the number likes for different tweets, this is the data that will show the audience reaction to each tweets, this will also allow the development of a criteria to know, if a tweet falls in to a good or bad audience reaction category, I.e. Large number of likes can be regarded as good reaction and less number of likes can be regarded as bad reaction. The number of retweets will allow the determination of audience engagement to get a tweet to go viral and hypothesis questions would be developed around this.

This study will answer questions about if the number of retweets does not depend on the tweet type (i.e. Entertainment, Safety tips, Charity, Celebration and Business), if the number of retweet does not depend on the number of likes for each tweet and if the number of retweet does not depend on the interaction between tweet type and number of likes. This analysis will be done using R programming language with supported packages such as ggplot2 etc.

2 Objectives and Methodology

2.1 Objectives

The main objective of this thesis is to conduct a case study focused on promotion of a business through social media.

The partial goals of the thesis are such as following:

- i. To make a comprehensive literature review of the current state of the art in social media marketing.
- ii. To evaluate a current state of social media marketing using Lyft as a case study.
- iii. To propose a new optimized social media marketing strategy and make an evaluation.

At the end of the research, there would be a better understanding on how the use of social media has influence the company positively and negative side.

2.2 Methodology

The methodology of this thesis is based on the desk research of the secondary sources and literature. A primary data will be obtained from the selected organization via an interview and survey. The practical part will use scientific methods such as analysis, synthesis, comparison and deduction. Following on the results of the literature review and the findings in the practical part, final recommendations and conclusion will be formulated.

The first section of the work is based on the theoretical overview of the benefits and possible drawbacks of using social media to promote business and the channels used for the promotion. The methods that would be used in this illustrative research includes conducting randomly survey of data from 2016 to 2020 from the case study social media channels (Facebook, Instagram and Twitter). The data was analyzed to know which of the channels the case study uses the most by comparing the three social media channels and evaluating the results.

The second part of the work is based on the analysis of primary data which was randomly collected from case study twitter page via twitter API using r programming language. The data was collected and prepared for analysis, testing

3 Literature Review

A literature review was done by examining books, articles and research papers that the author of this thesis considered as relevant. All resources mentioned below were published by accredited scholars and researchers. Chosen literatures dispose the research topic within the context of the previous academic findings and sets the background for further studies.

3.1 Social media

Social media refers to an online website and application designed to facilitate intensive interactions, share of pictures, and moments between users. (Neti, 2011). Users may exchange ideas, share content, efficiently in real-time and collaborations. Social media has become an important part of the internet. Nowadays, most businesses use different social networks channel to promote the business and this has generated revenue for businesses also, social media help increase web traffic to website. The existence of social media helps to reach larger customer base which led to the introduction of social media marketing. There are many different social media used for both individual and public use. Public use can be for business and company purpose as a medium to interact. Some of the social networks channels are Facebook, Instagram, Twitter, LinkedIn, MySpace, Scribd, Flickr, YouTube etc (Indonesia & Java, 2012)

3.2 Social media channels

Over the past decades, Social media has developed over time and has many channels. These channels connect people by sharing media like pictures, videos, text post and so on. For research, the focus would be on the channels that the case study operates on, and other well-known social media channels. Below is some social media channels description.

3.2.1 Facebook

Facebook is an online social networking website that is dedicated to bringing people together. Facebook as a social media channels is currently one of the leading social media platforms worldwide with the largest audience. It really helps to generate traffic to your website. Facebook business pages can be a very powerful tool for marketing when used correctly. For example, if a user has a business and wants to increase traffic to the business website, with the help of Facebook, the user can create a Facebook page for business and post about the products or what the business is about. With Facebook groups, a user can post to different groups about the business and this will help create brand awareness and possibly generate potential customers. Also, there are Facebook advertisement where the user can directly target the right audience for the business and the user can set the advert to reach the right audience at the right time. The user can invite friends to like the Facebook business page and this can boast number of likes. The Facebook business page post should be consistent as consistency is the key to having active followers/ customers. (Patel & Patel, 2014)

3.2.2 Instagram

Instagram is a type of social media which is more focused on capturing and sharing images, videos and their life moments. Instagram is an app with more than 500 million daily stories active users. Instagram also introduced the Instagram IGTV which serves like a mini video post. (Instagram, 2020). The post can be shared either as a story which disappears at the end of the day or on the user's timeline and people's reaction is based on the number of likes and comments. There are reports which say that more than half of young adults between the age (18-29 years old) are Instagram users. (Hu, n.d.) Instagram is also a great platform for businesses to grow. Creating great content for ads posts help to generate traffic to the website. The use of hashtags is really important when using Instagram for marketing, geotagging of location makes the business page visible to targeted audience and engage the audience by telling a story with each post or asking a question. For Instagram business page to grow, the user should engage in replying comments and messages and also the user should comment on other similar business pages on Instagram by doing this, the page can have more followers. (Patel & Patel, 2014)

3.2.3 Twitter

Twitter is a microblogging and social networking platform where users interact real time. Twitter has a maximum character of 280 tweets per post for its user to tweet to their followers. Twitter can be used as a marketing tool for businesses for example, a company can advertise about their recruiting services, consulting services. For a business to be successful on twitter, the business owner must learn the language of tweets and the use of correct hashtags, mentions and retweet which creates brand awareness. Its user to post short texts, pictures, links and other type of media. (Alhabash & Ma, 2017)

3.2.4 LinkedIn

LinkedIn is one of the largest social media platforms for businesspeople and professionals to build strong network connections with influencers of interest. One of the important key features of LinkedIn is "LinkedIn groups" which makes it easier for business professionals with the same interest to interact, make business contact, discuss, find answers and share information and content within the group. People with similar interest or belonging to a particular association can interact using LinkedIn group. The number of group subscribers can be up to or more than hundreds of thousands of members. (Patel & Patel, 2014)

3.2.5 YouTube

YouTube is the second largest search engine after Google (the owner of YouTube) and largest video content sharing website in the world. YouTube is also a social network platform. According to (Negricea & Edu, n.d.), YouTube has 1.5 billion monthly users; two third of the users are between the age 18-44; over 400 hours of videos are uploaded every minute; 1 billion hours of video content are viewed on a daily basis; and over 50% of YouTube uploaded files are viewed via mobile devices.

3.2.6 Blog

A blog is a type of website where contents are presented in reverse sequence where the latest blog post appears at the top. A business blog refers to the way of driving positive word of mouth recommendations through the content that is published by the company. Blog is considered as one of the successful marketing tools when conversation on blog between the business and a visitor results in the visitor purchasing and becoming a potential customer. Blog post helps business to build meaningful relationships with customers and also increase loyalty. It is advisable for business to engage in blog post of their products and services often and also throw polls like giving discount when a referral is made, prices for answering questions etc. It is also advisable for companies to install analytical tool called Blog Tracker, this tool enable the business to track the blog visit and to know the blog performance. (Castronovo, 2012).

3.2.7 Snapchat

Snapchat is one of the social media channels and a fast way for sharing fun moment with family and friends which expires upon viewing and stories which can be posted privately or publicly disappear after 24 hours. According to (tech crunch,2020) came up with some highlights about snapchat like:

- i. 1.3 trillion snaps were created in 2019
- ii. The average time a user spends on snapchat is about 30 mins per day
- iii. Over 50 snapchat shows reached a monthly audience of 10 million views or more.

Snapchat users worldwide are roughly between the age (18-29 years old). Snapchat has some features like sending notifications when a user's conversation or post is screenshot, this provides more privacy for the users. Snapchat can be used as form of social media marketing for businesses too. The business can post their unique content via snapchats and also make live videos of the products on snapchat for free and these videos disappears after 24 hours from the business story. (Alhabash & Ma, 2017)

3.3 Importance of promoting business through social media

Before using any tool for the purpose of business growth, it is advisable to know why such tool is important and will be great benefit for the business growth and performance. Social media is very important for the business growth because it helps to promote the company's name, brand by creating a strong social media platform for regular company details, blogpost and news updating. The social media platform keeps the potential customers updated about the company and its products. It also makes it possible for the company to easily place adverts on their new products and closely communicate with their potential customers and gets feedbacks, requirements and review on products and company as a whole. This process enables future customers to have an idea of how good or bad the company's services are. When promoting business through social media, the company spend less money and gets

more profit. Social media channels are very effective tools to improve the company's reputation (Singh & Sinha, 2017)

3.4 Methods of promoting business using social media

Social media refers to the ways in which a company or business use different technologies by reaching out to other humans in order to create relationship and build trust. (Adrees, Sheta, Omer, Stiawan, & Budiarto, 2019). Social media has rapidly grown over the years worldwide. The most popular social media channel is Facebook. Before the knowledge of social media marketing, Facebook has always been used to connect and communicate with friends around the world. Now, Facebook is not just for communicating and posting of moments alone but to do businesses and promotions. According to the result of a study which says that Facebook is an important tool for marketing and can significantly increase customers loyalty to brand in an e-commerce environment. A customer's loyalty is determined by the following 3 circumstances: Behavioural loyalty, repeat purchase intention and word of mouth. Behavioural purchase factor is determined by how the customer is devoted to the brand, willingness to pay for more products. The repeat purchase intention factor is determined by the customer's intention of repurchasing the product from the same brand in the future, this can influence long-term relationships. (Sfenrianto, Yunita, & Gunawan, 2018). The word of mouth factor is determined by the customer recommending the product, brand or the company to others and leaving positive reviews on the company website. (Sfenrianto et al., 2018). There are many different methods of promoting business while using social media channels. Below are some ways in which a business can generate brand awareness and maximise its revenue.

3.5 Impact of promoting business through social media

Social media has majorly impacted the world and business. More than 71% of the people on the internet are social media users, of which 61% of social media users globally are on Facebook, therefore businesses can reach 71% of global internet users by promoting its products and services through social media and also businesses can reach 61% of global social media users by promoting its products and services through Facebook (Song, Wang, Chen, Benitez, & Hu, 2019).

Internet connects the universe and makes communication more effective and simpler. The social media is also very useful for businesses, by creating a better interaction between their suppliers, their targeted customers, investors and other people who are connected with the company for growth and performance. (Singh & Sinha, 2017).

Social media enables the company to know the preferences, likes of their customers, friends and family. To avoid a negative comments and reviews about the company's product on the website, the social media campaign strategy must be carefully setup in the sense that the right audience are targeted and at the right time. There are different ways of promoting business through social media. The common ways of business marketing are throwing ads on Facebook, Instagram, Pinterest, Google AdWords, Twitter and LinkedIn. This social media networks makes it easier for the business to grab the attention of their customers and to build brand image. (Beyari & Abareshi, 2019) It is really important to know pros and cons of using social media for business promotion. The advantages and disadvantages of promoting business through social media shall be discussed below.

3.5.1 Advantages of promoting business through social media

The advantages of using social media to promote business includes, Data sharing, Exchange of information, creating a channel for communications between clients and It increase revenue for the company (SI, 2015). Overtime, there could be need to introduce new products to the audience, this can be done by sending social media campaign to the audience as a form of awareness about the new products to be introduced (Baum, Spann, Füller, & Thürridl, 2018). Sending social media campaign would allow access to analytics which can be used to predict the impression of consumers on how reliable, real and respectful the brand is (Zanon, Scholl-Grisseemann, Kallmuenzer, Kleinhansl, & Peters, 2019). In business environment, social media business model created from the adopted strategic opportunities by the company helps build a reputable brand image and also creates a channel for interaction with the customer (Abuhashesh, 2014). With the help of social media marketing and building a store environment, the retailer can access consumer's behaviour and purchase decision (Hanaysha, 2018). Including customers reviews and comments on the social media page of the company helps to gain a quality customer satisfaction, retention and loyalty. (Ramanathan, Subramanian, & Parrott, 2017). Social media marketing for e-commerce helps to grow product offers and increase geographical reach (Khan, 2016).

3.5.1.1 Uses of social media for search engine optimization

Search engine is one of the best ways to promote businesses especially local businesses such as restaurant, salon, barber shop etc. social media has a great impact in the search engine optimization of business (Egri & Bayrak, 2014). These impacts are;

- **More user traffic:** A business can link it website to it social media pages, this can be a source of relevant traffic generation to the business website, generating relevant traffic to websites reduces bounce rate and improves search engine optimization.
- **Exposure:** A lot of people globally spend more of their internet time on social media, therefore it is important to create social media pages for business to get businesses much more popular
- **Close business relationship with audience:** Businesses can stay much closer to their audiences to get real-time reviews, demands etc. this will enable prompt improvement of business strategies for better customer satisfaction.
- **Connecting with influencers:** Social media influencers has huge impacts on users because of large number of followers, friends etc. connecting with social media influencers can expose brands to huge audiences which can result into great brand awareness.

3.5.2 Disadvantages of promoting business through social media

Everything that have pros also have cons. Social media usage also has some dark side for business and it is important to understand what these dark sides are for businesses to be aware of how deeply these dark side impact our business lives. these brings about new privacy considerations opportunities and challenges for consumers and advertisers.

According to (Baccarella, Wagner, Kietzmann, & Mccarthy, 2018), which state the social media gone bad example where in 2017, the United airlines made headlines when a footage video was posted on social media where a passenger name Dr. David Dao who was forcefully taken from his allocated seat which he paid for on the united express flight 3411 so that the deadheading airlines staff could take his booked seat but with the help of social media, the video went viral and led to unsuitable impact for the united airlines. And many more examples of the dark side using social media for private and business lives.

Below are some of the building blocks of social media dark side which unpacks social media functionalities. (Baccarella et al., 2018)



Figure 1 The dark side of social media functionality (Baccarella et al., 2018)

- i. **Conversation:** This type of building block refers to the lifeblood of social media where users communicate with others using social media setting. Conversation can be in form of direct message, comment, and like. Social media marketer converse between their brand and users to get review on their products. Social media conversations can be from Instagram, twitter, Facebook, LinkedIn and many other platforms. Blog is also an important form of conversation where users can post, comment and discuss topics or news. The disadvantage of conversation is that it can lead to an aggressive, unreasonable engagement which also can be inform of threat, bullying and misleading advertisement. (Baccarella et al., 2018)
- ii. **Sharing:** Sharing content refers to the way of making the brand known whereby the consumer tradeoff, give out and receive content. Also, it is important to be careful what is shared via social media as there are many fake news that are being spread. It is very important for business to carefully have genuine and authentic content before sharing on social media to avoid copyright infringement and threats. (Baccarella et al., 2018)

- iii. **Presence:** This framework blocks describe the extent to which the user is available. Where, when and how others are accessible. According to (Baccarella et al., 2018), from 2011 to 2015, when Facebook launched the messenger application for mobile devices. The aim was to collect and display geolocation information with message content in the conversations. Some organizations were concerned about invading privacy and side effects for sharing geolocation of the application. The presence dark side is directed to securing peoples safety while engaging on social media.
- iv. **Identity:** This framework talks about presenting one's identity to social media inform of data like gender, age, name, location and so on. also, user can provide their identity by joining groups, liking, commenting on content they come across on social media. Presenting one's identity online has many side effects and it's at the safety risk and lack of privacy. Using one's identity without their consent has now been harmless. For Europe, a report commissioned by the Belgian privacy commission which state that the largest social media platform fakebook privacy settings are so hard to change and find. And that Facebook does not have control concerning user data. It is very important to know what type of information users give out on social media platforms. (Baccarella et al., 2018)
- v. **Groups:** The group refers to the extent to which a user can communicate, create and participate in communities. On Facebook, people participate in open and closed groups for different purpose like entertainment, sharing knowledge, posting business products and socializing. The dark side of this framework is that some users from the same group are belittled and excluded from some conversations because they feel like they do not fit in. Also, some inappropriate topics are thrown into the group which will cause arguments, throwing abusive words, gender (in) equality also serve as a good example.
- vi. **Reputation:** Building a brand reputation is one of the keys to have a successful business. But then there is major risk related to sharing inappropriate information on social media which can destroy the business reputation because the more viral it spread, the more harm it causes its reputation. Every year, many major business brands, individuals and others are forced to put down deceitful, absurd and offensive content they post on social media due to lack of being security conscious.
- vii. **Relationship:** This framework refers to the extent which a user can be related with other users through the medium of social media. This means that users have some form of association with other users and this makes them engage in conversations, sharing content and so on. apart from connecting users, social media has dangerous consequences like cyberbullying, stalking and harassment. The business to consumer relationship on social media also takes different forms for example, A user might like a business content because of their products and wants the business page to appear on their feeds and other users might like a product and request for more information about such product via social media messaging. (Baccarella et al., 2018)

3.6 Benefits of using social media for promoting business

Social media marketing (SMM) is also called community press marketing and it has an important role in the promotion of business. Social media marketing acts as the windows for marketers to showcase not only their products/solutions but also for marketers to know their customers/consumers feedback on their product and services in order to know the area of customer service the business needs to improve on. (SI, 2015)

Social media promotions enable the business to:

- Gain exposure to more companies
- Generate more traffic/ subscribers
- Generating an increase in sales
- Development of internet on search engine optimization ranking
- Meet new business partnerships

Before a company decides on which social media channel to use for the success of its business, there are some factors to be considered as to know the benefits of using such social media. Below are also some of the major benefits of using social media as a marketing tool for a business. (Muninger, Hammedi, & Mahr, 2019)

- i. Brand awareness:** A lot of work is done when a business wants to market its brand to the people. And during this process, the business should state the importance of their brand to its customers why it is worth buying. With the help of social media, it is easier to increase the brand awareness by marketing through other mediums like (paid search, organic search).
- ii. Enhanced customer insight:** Social media allows the business to see what their potential customers behaviour are and also it gives the business the opportunity to gain valuable information about the interest of their customers. For example, you can divide your content and sort it based on the topic and see which content drives more traffic and then you can generate more of that content type. Also, you can monitor your potential customer's comments to have an idea about their impression of your products directly and network with them as well.
- iii. Improved customer service:** With the help of using social media, it makes it easier for the business to maintain their brand's respected reputation and provide high quality customers service. Customers often have questions and wants to leave a review about product purchased on the business's website. According to Forbes, 71% of consumers who receives a quick response on the social media page of the business are more likely to recommend the brand. (Singh & Sinha, 2017). And how your business is observed online really influences the buyer behaviour. It is really important to build a strong social media page for your business because customers usually tend to check your social media page before attempting to make purchase on your website.
- iv. Profit maximization:** No matter what you sell, social media is always there to help you sell it. Social selling gives your marketing and sales team the opportunity to build relationship with existing customers and also potential customers. Creating means for networking and connections. As the number of people on social media

continue to increase, there is possibility of generating more sales through active, engaging social presence like Facebook, twitter, Google+, Instagram etc. (Singh & Sinha, 2017)

- v. **Boost website traffic:** Social media platforms are best way to advertise your brand on your website. Getting your product to the right audience at the right time and in the right way can be tedious. This requires experienced professional personnel to manage the social media page of the business because it works excellently when done correctly by driving traffic to the website and also and turning visitors to potential customers. Include a link to your website in your social media pages and also include promotions and your blogs.

3.7 Role of social media marketing

Social media is now the major channel used by businesses/companies for a promoting their product and services either through the medium of advertising, political strategies, interaction between customers and the businesses. (Ramanathan, Subramanian, & Parrott, n.d.)

The following are some of the important role social media plays:

- social media can be used as a medium for businesses or companies brand awareness
- social media can be used for providing connections between customers and companies
- social media can be used as a means of authenticating business product to the audience
- social media creates medium for users to quickly reach the company's website.
- Social media can be used as a means of generating traffic for the companies by placing their URL in their social media user profile

3.8 Digital marketing in business

Digital marketing is a new technique to marketing and one of the ways of showcasing business online using new digital technologies to innovate and to enable business to expand markets in many possible forms. It plays an important role in the survival, growth, development and success of businesses. Also, internet plays a crucial role in the progress and evolution of marketing by making it possible for businesses to exhibit wide range of products, services, means of purchase, payment method, prices and mode of communications that makes it easier for the business to convey information to the customers / consumers. (Teixeira et al., n.d.).

3.8.1.1 The important and benefits of digital marketing

For the success of a business, it is important to know the advantages and disadvantages of using the digital marketing campaigns. Below are some of the advantages and benefits of using digital marketing to grow business.

- **Cost efficiency:** Digital marketing has lower cost compared to traditional marketing where the cost of running a campaign through newspaper, television, and many other ways is more expensive. By using digital marketing, websites can generate traffic for free, fewer resources can be utilized for campaigns and the campaigns reaches targeted audience. (Todor, 2016)
- **Interactivity:** With the use of social media for digital marketing, there is room for more interactions with the audience unlike the traditional marketing methods. Also, digital marketing makes it easier for audience to give their review on products, visit the website, read about the products and buy. This makes the business to gain good relationships with its customer by gaining their loyalty and trust. (Todor, 2016)
- **Rich content:** Digital marketing provide the audience of a business with unlimited content which and also be updated anytime when necessary
- **Personalized:** Digital marketing provides means of customizing profiles based on consumers behaviour and preferences. That is, the more they purchase from the company, the more the company or business can refine its customer profile and market effectively to them.
- **Availability:** Digital marketing through world wide web (www) never has closing time. This means that online promotion resources can run almost 24 hours a day and 7 days in a week. (Teixeira et al., n.d.)
- **Realtime result:** with the use of web analytics tool, it makes it easier to deduct how beneficial the campaign has been. Using digital marketing, it is also easier to track all user's behaviour on the website like when they visited the page, what they were most interested in and the time spent on the website navigating (Todor, 2016)

3.8.1.2 Disadvantages of digital marketing

According to (Todor, 2016), Some of the challenges of digital marketing every company or businesses should be aware of are:

- **Competitions:** With the growth of many ads online nowadays, the rate at which a business experiences competition is high too this makes it difficult and more expensive to get the interest of targeted viewers/ audiences.
- **Security and privacy issues:** Some users may not trust the payment method by using their credit/debit card information on some website. The fear of being defraud is high. Users are reluctant to reveal their private information as it may be used by third party.
- **Copyright:** Copyrighting one of the hazards in internet marketing today, promotion strategy content can easily be copied by its competitors. Pictures or images can be used to deceive customers.
- **High Investment:** Before a business starts digital marketing, it is of high importance to find highly experienced and the best digital marketing executive suitable for the Ads campaigns like search engine AdWords, and search engine ads. This is quite expensive for especially small businesses. (Todor, 2016)
- **Awareness:** Digital marketing is not known by all people most especially the old people do not trust digital technologies as they prefer the traditional method which they are familiar with.

3.8.1.3 Digital marketing Channels

Digital marketing has many different channels used for easy communication and interaction between businesses and the customers/consumers. Here are some of the popular and mostly used digital marketing channels:

- **Social media marketing:** Today, social media marketing is the most important digital marketing channels. Social media marketing goal is brand awareness, to initiate social trust and also possibility of lead generation and sales when conducted and monitored very well. Social media marketing network includes, Facebook, Instagram, LinkedIn, Twitter and Google+.2(Yasmin, Tasneem, & Fatema, 2015)
- **Search Engine Optimization:** Search engine optimization which is usually abbreviated with (SEO) is the process of influencing the visibility of a website and improve business's ranking in the search engine like Google, yahoo and Bing. The main objective is to drive more targeted visitors to the website (Barbar, n.d.)
- **Email marketing:** Email marketing is one of the oldest but the best ways of communicating, informing, promoting, engaging and selling depending on the goal, with customers and audience via email. This medium can help build brand loyalty, get new customer or engage with returning customers and also give businesses an insight into their buyer's behaviour. (Sahni & Wheeler, 2016)
- **Content marketing:** Content marketing is one of the most important digital marketing tools and it involves creating and sharing content materials such as videos, blogs, pictures online with the aim of promoting the brand or company without losing customers interest. Content marketing has become the key of a successful online marketing campaign. For a business to standout, the content must be well curated and should be based on the company values. (Baltes, 2015)

According to (Baltes, 2015), Suggested the following important key areas aspect to be taken into consideration by the content marketing specialist.

- i) SEO (Search engine optimization) keywords must be correctly develop
 - ii) Focus on topics that are of interest to the customers as this will get their attention
 - iii) Monitor the reactions online by metrics to know the performance of the content.
 - iv) Variety of media like (infographics, videos, pictures webinar, eBooks, blogs and audio content) should be available to back up the content written
 - v) Always Engage with the users that share and comment as this is important because it is the best way to connect and reach potential prospects
- **Affiliate marketing:** Affiliate marketing is another channel of digital marketing and is involves the affiliate (the publisher) promotes other people's product and get commission or reward each time the affiliate (the publisher) make sales or get a lead. This type of marketing is based on performance.(Aswathy & Nair, 2020)

- **Pay per click:** Pay per click (PPC) is a way of using search engine advertising to generate clicks to your website. That is, advertiser pays a fee each time any of their ads is clicked. The most acceptable channels for Pay per click campaign are Google, Facebook, LinkedIn, Pay per click is good for researchers and advertisers. (Aswathy & Nair, 2020)

3.9 About Lyft Company

Lyft is one of the fastest growing and largest transportation platforms in the United States and Canada. Lyft was founded in 2012, over 1 billion rides has been completed through Lyft platform. The company confirms over 1.1 million riders and over 18.6 million active riders in over 300 markets. Lyft's mission is to "improve people's lives with the world's best transportation, its diverse community of riders, drivers and employees requires a meaningful way of supporting the communities. (Summary & Strategies, 2019)

Lyft's vision is to make the world a small place by connecting its diverse community together using technology and focusing on its unrelenting development and growth. Lyft also uses social media to improve its brand awareness and digital growth, this has been achieved by using the features available on different social media platforms such as; LinkedIn, Facebook, Twitter, Instagram, and Snapchat. (Summary & Strategies, 2019)

3.9.1 Usage of Social Media by Lyft company

Social media been around for many decades but wasn't popular, most companies never paid attention to it as a powerful tool for marketing and as a communication tool until over a decade ago when Facebook was launched. (Manrai, 2014)

Brand consistency is one of the key strategies of Lyft's social media usage, Lyft consistently publish its brand across all marketing touchpoints. This is a way the company represent its brand by writing in similar tone across all social media networks. Achieving this, Lyft company constantly perform a social media audit across all its social media networks, the company ensure logos, banners etc. are consistent with its brand guidelines, Lyft company is as well consistent with its post schedules and aligns all posts to the feel and look of the brand. (Lyft.com)

Lyft extends its visual branding in terms of colours, fonts, backgrounds, overlays etc. This is a strategy to give a unique identity to the visual branding of the company no matter what platform the user is viewing from, Lyft made sure they give visitors the impression of knowing that the content is about their company. In achieving this, Lyft included the usage of colour and fonts in its visual brand guide, Lyft categorized its social media post with similar fonts and colour, i.e. A particular font and colour are used for all posts that belongs to a particular post category and also all images and videos used on Lyft social media networks are created keeping in mind the beauty of the brand and its colour identity. (lyft.com)

Lyft publishes its marketing content ideas based on the personas of its customer base, this marketing personas allow Lyft to know the best content and voices to put out considering the general information about the audiences of every social network. For example, the kind of content applicable to LinkedIn audiences might not be applicable to Snapchat audiences. Lyft was able to achieve that by, setting up multiple marketing personas and assigning a matching social media, Lyft was able to examine and know more about its audience by reviewing its networks' different demographics, Lyft then created content that match its marketing personas. (Summary & Strategies, 2019)

Another important key strategy for social media post branding that Lyft adopted was "captions" each company tend to have some personality which is related to the way the content is put together, Lyft implemented voice and tone guide to bring about consistency in the social media post, this would be effective in a situation whereby, multiple team members are working on a particular social media platform. Lyft was able to adopt this strategy by developing a voice and tone manual that was used to validate the writing style decisions, Lyft audit its own social media post to improve on its voice and tone, also updating this manual and sharing it using an internal platform accessible by the company's social media team.

Lyft has multiple account for different area of focus based on the location, support, marketing and customer service, accounts specifically for a particular department etc. Achieving this strategy Lyft looked at where it was best to divide the focus, maintain multiple accounts under a single ownership using a third-party platform built for that purpose. (lyft.com)

3.9.2 Evaluation of Lyft social media

Facebook, Twitter, Instagram, LinkedIn, and YouTube are the most popular social media platform. Lyft created business profiles/pages on these popular social media networks for credibility and reputation purposes.

Published Lyft posts on each social media was counted on monthly basis from 2016 to 2020, the number of posts data was collected from January to December repeatedly for 2016, 2017, 2018, 2019 and 2020.

3.10 Social media page map/layout

3.10.1 Facebook

According to Lyft's Facebook social media page, the profile is laid out for easy accessibility of the most influential categories of information/content in Lyft see Figure 2.

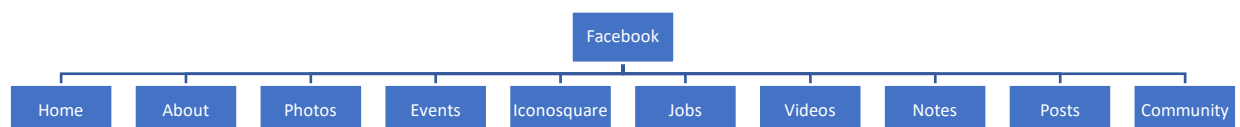


Figure 2 Lyft's Facebook page map

- **Home** menu comprises of majorly all posts with highlights of photos and videos,
- **About** menu comprises of Lyft’s business information such as the Team members, contact details, support availability and description of Lyft’s app services.
- **Photos** menu comprises of photo albums such as; Timeline photos, Cover photos, Profile photos, and albums of all trending events in Lyft.
- **Events** menu comprises of upcoming and past events organised by Lyft with dates, venues and guest attending each of the events.
- **Iconosquare** menu is a Facebook analytics tool which provides metrics information about Lyft’s Facebook page followers.
- **Jobs** menu on Lyft’s Facebook page comprises of jobs posted by Lyft when more employees are needed.
- **Videos** menu, Lyft shares all the moments with the customers, drivers, the fun events and reviews about Lyft.
- **Notes** menu comprises of the important notes that Lyft post.
- **Post** menu comprises of all Lyft timeline activities it can be status update, change of profile pictures, change of cover pictures, the poll that was created by Lyft and all comments, likes and all public post on Lyft page.
- **Community** menu shows the top fans of the week i.e. the most active person on the Lyft page, visitor’s pictures and Lyft public post.

3.10.2 Twitter

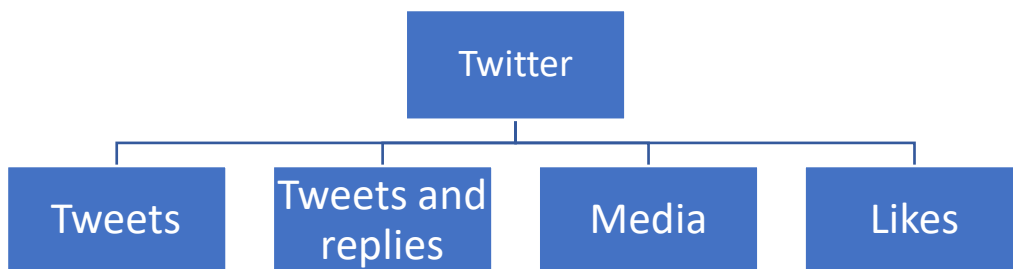


Figure 3 Lyft's Twitter page map

Lyft’s twitter social media page is laid out for easy accessibility of the activities of Lyft on twitter.

- **Tweets** menu is where Lyft post texts, videos, gif or photos appears on Lyft page.
- **Tweets and replies** menu comprises of the important news and other important discoveries that Lyft retweets on the page for followers or page visitors to see.
- **Media** timeline menu display all the photos, GIFs, videos, texts containing videos, animations that Lyft uploaded with tweets are stored.
- **Likes** tab shows all the tweets that Lyft appreciated.

3.10.3 Instagram

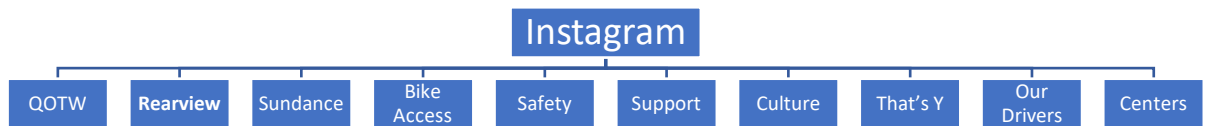


Figure 4 Lyft's Instagram page map

Lyft Instagram social media page laid out for easy understanding of Lyft in terms of purpose, mission and vision.

- **QOTW (Question of the week)** on Lyft Instagram social media page gives weekly hints on what to bring up in the next ride with Lyft and also a weekly reminder on how to throw boring questions out of the window on the customer's next ride in order to make the ride more fun.
- **Sundance** highlight page on Instagram was about launch of Lyft up program which focuses on working together and making donations for providing affordable and reliable transportation for all and access to help people that are in need. (Lyft Instagram)
- **The Bike Access**, Lyft up program partners with LeBron James and his athlete's empowerment program to connect communities in need through bikeshare access.
- **Safety** highlight page gives the safety precautions for drivers and customers in order for them to feel safe.
- **Support** highlight on Lyft Instagram page shows who to contact when having trouble while using Lyft app.
- **Culture** highlight on Instagram page talks about Lyft been part of afro tech. Lyft at afro tech program talks about inclusion and diversity on how the workplace culture will attract the team members, drivers and riders.
- **That's Y** highlight page show Lyft drivers' quick interviews and what motivated them to be a Lyft driver.
- **Our drivers** highlight posted about appreciating all Lyft's drivers with their pictures and short bio and customers reviews about the drivers.
- **Center** highlights on Instagram page talks about what the Lyft center mean. Lyft centre is a community space where Lyft drivers can get their car serviced and connect with other drivers. (Lyft Instagram)

3.11 Social media team

Lyft created its social media team by taking into account some important goals such as; awareness and generating more users. These goals were used as a factor to set aside the team's requirement such as; workspace, salaries, technology, ads budget. (Summary & Strategies, 2019)

3.11.1 Social media head

Social media head are the ones that manages and leads the whole team, they basically hold the team in place. The roles of social media head in Lyft company are:

- They come up with different social media strategy
- Campaign planning
- They set the goals and deadlines
- They create awareness for Lyft as a brand and its products
- They build Lyft's online reputation
- They are in charge of content development
- They are in charge of content promotion and decide on what content to be promoted or not
- They come up with ways to generate leads and conversion
- They supervise and ensures the team works properly
- They ensure and maintains the relationship with key stakeholders

3.11.2 Social media content developer

The content developers in Lyft's social media team are the ones with the words, content is regarded as the fuel of every social media page and it's the value added to the environment, to get the optimal value of this content it is required for to have social media content developer among Lyft's social media team. The content developer comes up with unique words to professionally express/describe captions, posts and campaigns on Lyft's social media pages. (Summary & Strategies, 2019)

They are required to carry out main roles such as;

- Being on top of the industry news
- They are required to collaborate with the designer
- They are required to publish contents on all the social media pages/networks
- They create micro and macro contents for the company
- They are required to be able to share third-party resources
- They are required to come up with new input

3.11.3 Social media community manager

The community manager serves as the intermediary between the brand and the customers, they interact with the customers and answers all questions and thank the customers within and outside Lyft's social media platform. (Summary & Strategies, 2019)

The social medial community manager carries out the below roles in Lyft company;

- They build a consistent and great relationship with customers
- They support brand advocates and other brand lovers.
- They can use their personal profile to also build the brand visibility where needed.

3.11.4 Social media Advertiser

The social media advertiser serves as the one that knows the best strategy to use for advertising with great sense of all social media platform understanding. Lyft's social media platforms are being managed by professional to set, monitors and adjust ads so Lyft can get the most out of every campaign for the lowest price possible. (Summary & Strategies, 2019)

The social media advertiser carries out the below roles in Lyft company:

- They implement the A/B testing with multiple component of the ads
- They must set correct target audience for every campaign
- They create ad content and can also work together with the content manager and a designer.

3.11.5 Social media analyst

Social media analyst for Lyft are individuals who are passionate about numbers and stats. Lyft's social media analyst main goal is to support Lyft's team with directions and insights.

Lyft's social media analyst roles are as follows:

- They study industry trends, how to use the necessary tools and understand all social media platforms
- They ensure that Lyft as a brand reaches the social media goals like awareness, sales etc.
- They define new audience for Lyft
- They provide reports when needed

3.11.6 Social media graphic designer/ video editor

Social media graphic designer/video editor for Lyft have a keen eye for visual details and are knowledgeable of at least one design tool. Social media graphic designer/video editor plays an important role in a social media team, they produce great visual content like images, logos, illustrations and these visual contents is part of what makes a Lyft grow. (Summary & Strategies, 2019)

The visual team have specific roles to play also. And some of these roles are listed below;

- The visual team work together with the content creator and also communicate with other members of the team.
- They arrange work with brief requirements.
- The visual team create Images, videos, illustrations, animations logos, banner and other visual materials.

3.11.7 Social media influencer manager

The social media influencer manager manages the relationship with influencers and making sure the content on the influencer's pages respects Lyft's value and is and proved to be a fruitful one. (Summary & Strategies, 2019)

The social media influencer manager roles are as follows;

- They get involved in social media campaigns that contain the influencers activities
- They create and monitor content for influencers
- They make research on new influencers
- They research on competitors
- They conduct good relationship with the influencers

3.12 Social media campaigns

Social media campaigns are the process of coordinating marketing efforts to strengthen or assist with business goal using one or more social media platform.

Lyft coordinated a different marketing strategy for its social media campaigns marketing using Facebook and Instagram. (Summary & Strategies, 2019)

3.12.1 Setting Social media campaign for Lyft

Lyft sets goal to achieve for its social media campaign using Facebook and Instagram. Lyft goals for the campaign includes:

- Getting feedback from users
- Building email marketing lists
- Increasing website traffic
- Enhancing overall brand engagements like Facebook which is measured by shares, likes and followers. Instagram which is measured by Likes and followers and twitter which is measured by Re-tweets and followers
- Enhancing sales traffic

Before building campaigns, Lyft goals are discrete and measurable. Lyft obtain a baseline measure of its targeted metric so that it can closely monitor the campaign performance to track all changes throughout the campaign and beyond. Lyft use the social media platform that most suit its targeted audience. (Summary & Strategies, 2019)

3.12.2 Building a social media campaign

Before building a campaign, all Lyft's tracking tools for metrics are in one place. Social media management tools like Hootsuite etc. which is integrated with Lyft's social media accounts and helps with tracking shares, retweet, likes and Lyft's keywords. Once the

foundation has been reached i.e. definition of goals and campaign timeline has been scheduled. (Summary & Strategies, 2019)

Having a strong beginning and ending is necessary, in order to consistently put a check on the costs and goals of the campaign and it is also necessary for A/B testing i.e. the performance of the campaign before and after published.

3.12.3 Social media campaign best practices

- **Action gate:** Lyft invites its users to interact with social media posts by asking questions, join mailing list, providing reviews and taking polls. With is practice, Lyft can deduce the good and the bad side of its social media campaign.
- **Provide motives:** Lyft offer discounts, prizes, and exclusive content of its users for their attention and information which they provide about themselves.
- **Make prizes decent:** Lyft believes that when organizing a contest, it is important to offer a decent item or gift for the first price
- **Keep an eye on the competition:** Lyft knows who its competitors are, what they are doing, how they are doing well and any possible threat that it can be to the business
- **Promote across all social media accounts:** Lyft promote its campaign across social media platforms like Facebook, Instagram and twitter.
- **Monitor performance:** Lyft closely monitors its campaign performance to know if its effective and adjust strategy if needed.

3.13 Lyft Performance report from Analytics compare to Uber

Analytics gives Lyft a detailed report on its social media traffic. It interprets data accumulated from Lyft's keyword research. Below is impact of social media traffic analysis conducted by Lyft

- Analytics helps Lyft to identify which social media sends the most visitors to its website and the one that needs more attention.
- Performance analytics helps Lyft to know how engaged its social media visitors are and the time they spend on its site. This data helps Lyft to know if is targeting the right audience and if the content of the post is genuine.
- With the use of Analytics dashboard, it is easier for Lyft to know which visitors are new and which are returning. For example, if the visitors are not returning more often or reduce the amount of time they spend on its site, Lyft might want to change the social media strategy to boost more engagement.

3.13.1 Realtime

Real-time reports below allows Lyft to monitor the activity as it happens on all its platform such as mobile and web applications. It provides insight on how people are reacting to its marketing campaigns. Also, Lyft is able to see how many people are on its platform and their activities like the pages or events they visited, how much time they spent. A user qualifies

for the real-time reports section if their activity on a site is within 5 minutes unlike in standard reports session which is 30-minute window. (Perera & Suhothayan, 2015)

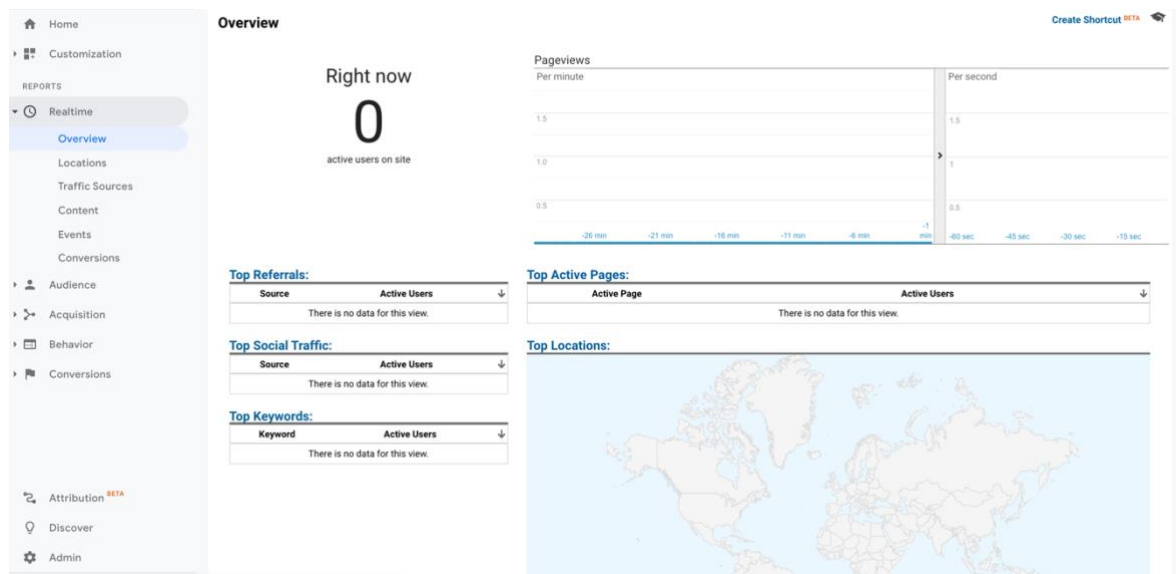


Figure 5 Example of a Google Analytics performance report source: (analytic.google.com)

Below is the category of reports from Lyft’s real-time analytics;

- **Overview:** The real-time overview section shows the highlight of the basic report summary. It shows the top ten pages on which users are active, how much time users spend on the website, what medium through which the users entered the website, Lyft top social traffic sources and users’ geographic locations.
- **Locations:** The locations report shows which country/city the visitors reside in, how many pages were viewed and what city the users. The data can be filtered by country on the map to see the geographic location.
- **Traffic sources:** The traffic sources section shows the medium which the visitors on the site right now saw the campaign. This is helpful whenever Lyft is running a campaign or a promotion on social media and want to see which social media platform is effective. (Perera & Suhothayan, 2015)
- **Content:** The content overview section shows the pages or screens which the visitors are spending more time on. It shows the page URL, title, and the statistics of active visitors that are on the page. Lyft can see the pages that was viewed in the last 30 minutes. (Perera & Suhothayan, 2015)
- **Events:** The event overview section makes it easier for Lyft to create a custom event for interactions on its website. Like downloads, video plays, ads click, and button click. On Content report overview page, Lyft can switch between current events and past events within 30 minutes ago. (Perera & Suhothayan, 2015)
- **Conversion:** The conversion section shows the goals which the users have accomplished on all Lyft platform. That is, mobile and web. Number and percentage of active users who have accomplished the goal set by Lyft can also be derived from the conversion report. This helps Lyft to know if the campaign that was just launched is generating positive results or not. (Perera & Suhothayan, 2015)

3.13.2 Audience

Audience data analysis report key information. Here, audience report allows Lyft to know the users who exhibit common characteristics, experience and attributes in a particular period of time and these users' characteristics like geolocations, languages and technology used. (Luo, 2018)

Table 1 Comparing audience insight performance between Lyft and Uber (Source: businessindex.sprinklr.com)

Audience Insights	Followers	Reach Rate	Engagement ratio
<i>Lyft</i>	1.4m	0.31%	0.44%
<i>Uber</i>	4m	1.73%	0.12%

From Table 1, the audience insight comprises of the count of followers across all social media network, reach rate and engagement rate for Lyft and Uber.

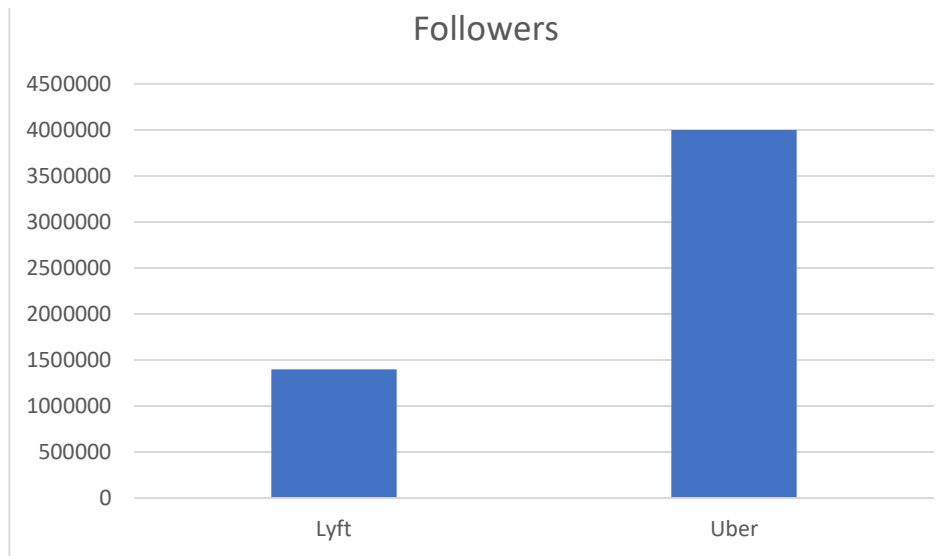


Figure 6 Graph showing the number of Lyft and Uber followers across all social media networks (businessindex.sprinklr.com)

Figure 6 Graph showing the number of Lyft and Uber followers across all social media networks (businessindex.sprinklr.com) shows that Lyft has lesser followers (1.4 million) than Uber (4 million), this can be as a result of different factors such as how relevant the contents publish on their social media platforms are to the brand, the influencers, content quality, content generated by users, content volume and timing.

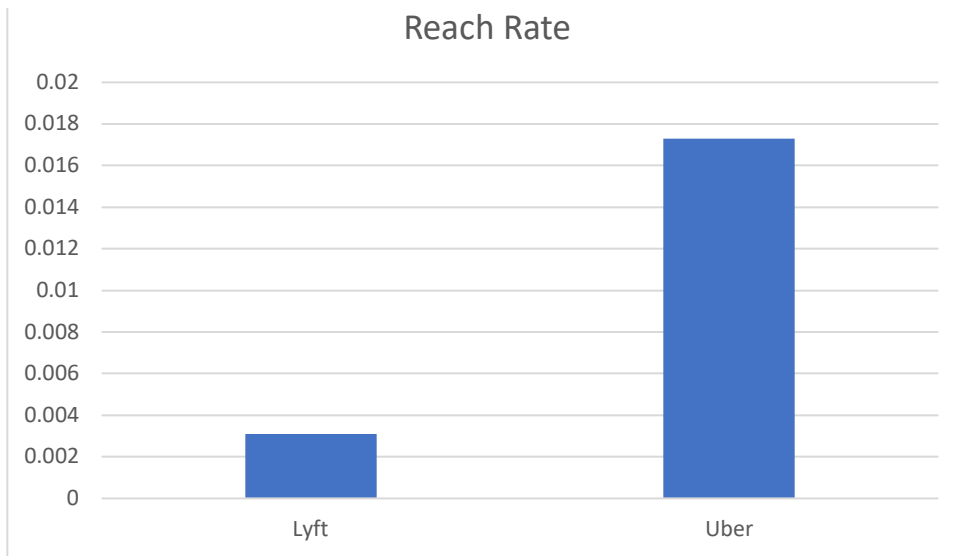


Figure 7 Graph showing the reach rate of Lyft and Uber across all social media networks (businessindex.sprinklr.com)

From the figure, the graph shows that uber has more audience reach rate of (1.73%) compared to Lyft's reach rate (.031%) this means that

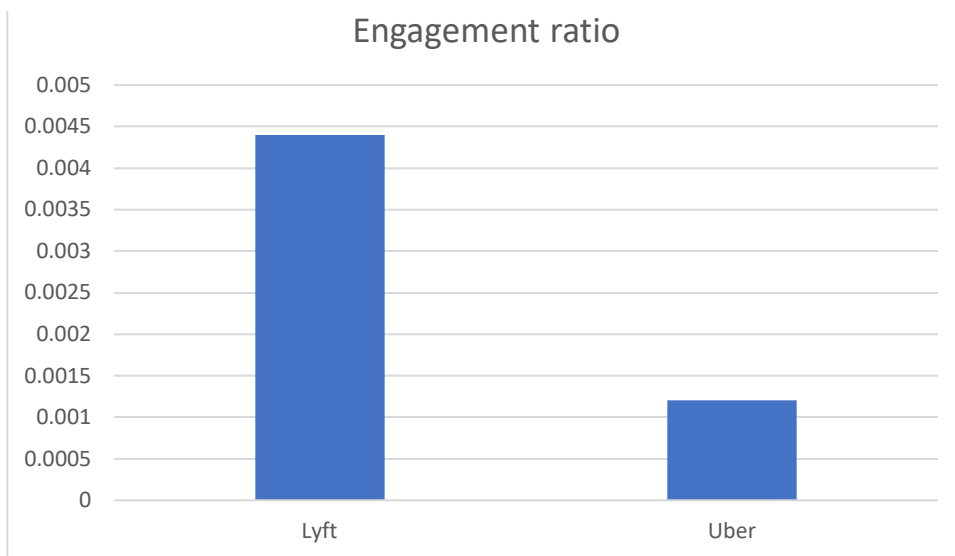


Figure 8 Graph showing the engagement ratio of Lyft and Uber across all social media networks (businessindex.sprinklr.com)

The table clearly shows that Lyft has more engagement ratio compared to uber

3.13.3 Acquisition:

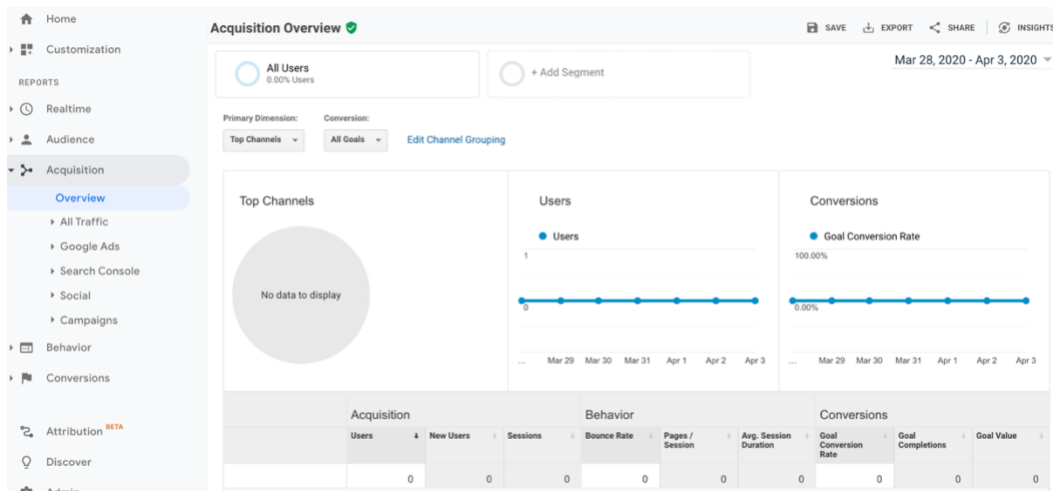


Figure 9 Example of Google analytics acquisition report source: (analytic.google.com)

The Acquisition data above shows how a website obtain its customers and from what medium/ channels such as organic search, referral domains, e-mails direct URLs, paid advertisement and social networks. There also show behaviour for each channel, reporting metrics such as the new users that visited, bounce rate, new sessions, average time spent duration, the page that was visited.(Luo, 2018) Here are some brief description of some important top channels that is on the acquisition overview report used for tracking traffic source.

- **Organic search:** Visitors who come to the website after searching through search engines like google.com, Bing, Yandex, and Baidu.
- **Paid search:** Visitors who come to the website from an AdWords, Facebook Ads or any other paid search ads.
- **Direct:** Visitors who come to the website without being able to know the source of referral. Such visitors can either find the website by typing the URL into their address bar or by using a bookmark on their browser.
- **Referral:** Visitors who visit the website from another website either by clicking on a link which directs the visitor to website. Referral source can be from a blog, social networks or paid ads.
- **Social:** Visitors who lands on the website from a social network such as Facebook, Instagram, YouTube, Twitter, LinkedIn, Myspace etc.

3.13.4 Behaviour:

The behavior reporting section below, It provides a graph which allows Lyft to know the performance of the content posted, the pages the visitors spend time on, the amount of traffic to the website and the actions visitors take on the website. (Szajewski, 2013) Here are some of the data that is on the behavior overview report.

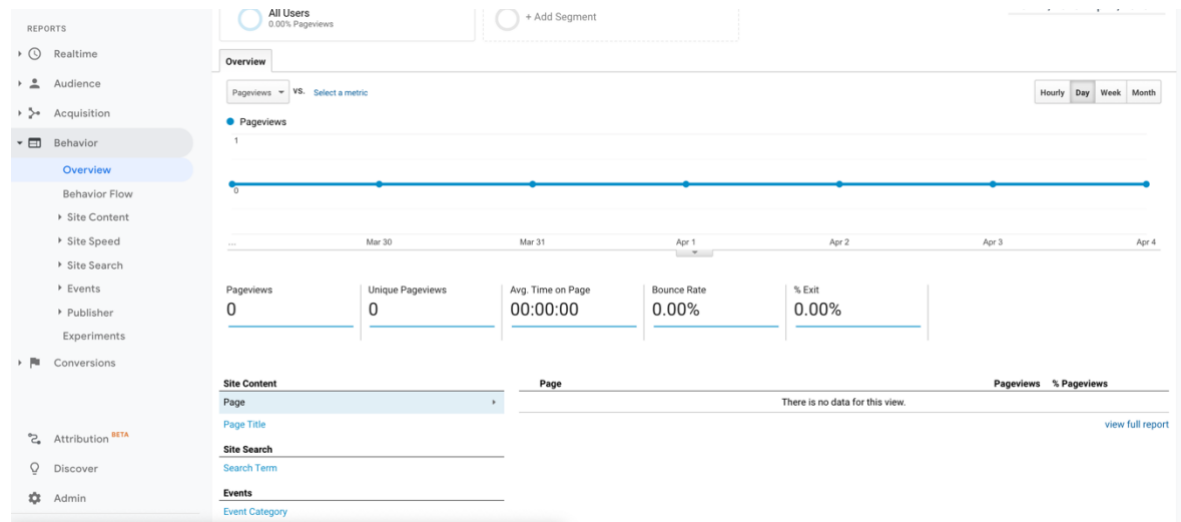


Figure 10 Example of Google analytics behaviour report source: (analytic.google.com)

- **Pageviews:** is the total number of times the page was viewed. And this counts repeated views of a single page. This means that a single person can view the same page many times and each action is counted as a page view.
- **Unique Pageview:** It represents the number of sessions during which the page was viewed and how many times. For example, if a single user views a page more than once, only the initial page visit is recorded.
- **Avg. Time on page:** The average amount of time a user spends viewing a specific page or screen.
- **Bounce rate:** The percentage of a single-page visit without any action. For example, a user who visits a page on the website and left without performing any action is referred to as a bounce rate. Usually, A bounce section has a duration of 0 seconds.
- **Exit:** The percentage of users who leaves a page or pages. That is, the report shows the last page people visited before existing the website. (Szajewski, 2013)

3.13.5 Conversions:

The conversion report section includes metrics related to the goals of the website. It also tracks actions the visitors take on the website, from landing on the website to making purchase and becoming a lead. It shows a detailed report on how visitors are converting, and this helps to improve marketing strategy. Below is brief description of conversion overview report.

- **Goals:** This gives the overview report summary of the total number of goal completion made on the website. The pages where the goal completions where

made is shown, the link to where the converting traffic originates. Goal reports are based only on the number of times spent, event, average number of pages and the number of steps the user take to complete the goal.

- **Goal value:** This is the total goal value that is produced by goal conversion to the website. This is calculated by multiplying the number of goal conversions by the value that was assigned to each goal.
- **E-commerce report:** The e-commerce section is typically used by sites selling products or services to keep track of the revenue and the of products sold. E-commerce section also give an overview insight into visitor’s journey from entry to conversion. It also summaries the ecommerce conversion rate, transactions, average order value, unique purchases, the quantity of products sold and the revenue. (Ahmed, Jilani, Haider, Abbasi, & Nand, 2017)

3.14 Lyft Corporate Social Responsibility (CSR)

According to (online.hbs.edu), Corporate social responsibility is business process model whereby non profitably organizations/ companies conduct their business in a way that is society friendly, ethical in other to have a positive impact on the community and society at large.

Lyft has mentioned some of its corporate social responsibility through an interviewed which was conducted.

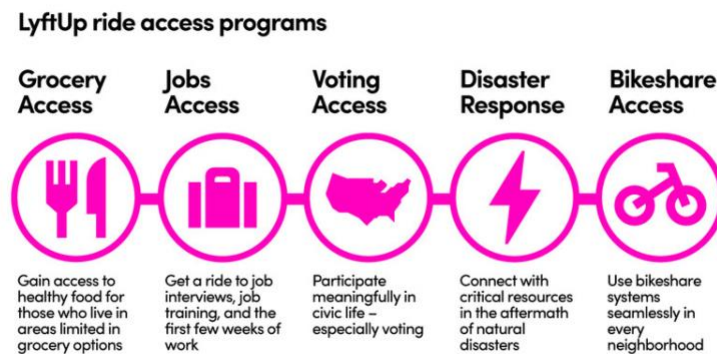


Figure 11 LyftUp Ride Access Roadmap (source: lyft.com)

3.14.1 Round-up and Donate Program

Lyft mentioned about introducing a program called Round Up and Donate. This program allows riders to round up their paid fares and donate the extra cash they make to the less privilege (charity). According to lyft.com blog post, Lyft announced that since 2017 of launching the round up and donate program, Lyft passengers have rounded up 20 million rides to donate over \$10 million dollars to communities across the country. (Lyft.com)

3.14.2 Lyftup Program

Lyft introduces a new program called LyftUp to support community where Lyft partners with LeBron James and his athlete empowerment company. This program was created to empower thousands of young people by providing free one-year bikeshare memberships for Lyft-operated systems by making transportation easier and more affordable and reliable for the people also help with connecting every neighbourhood. (Lyft.com)

3.14.3 Grocery Access Program

Lyft also launch another program called Grocery access. This program was created to help people who often travel long for groceries as this is time consuming and expensive for transportation. Lyft offers discounted Lyft car rides to low income families and seniors to take them for groceries shopping. (Lyft.com)

3.14.4 Vote Access Program

Lyft reported that from last year's election, more than 15 million eligible voters could not go the polls to cast their vote because they do not have the means of going. So, Lyft launch another program called Voting Access where Lyft provide free and discounted rides to the polls throughout the whole election period as every citizen is eligible to exercise their fundamental right. (Lyft.com)

3.14.5 Disaster Response Program

Lyft is ready to provide relief in the aftermath when disasters strike dense low-income communities. Lyft team up with local organizations to provide rides to help people in need the access to urgent services, shelter and other important resources. (lyft.com)

4 Practical part using Lyft company as a case study

4.1 Methods and data

For this research, the adopted methodology will be used for quantitative and qualitative analysis. A random survey was conducted on all social media channels in use by Lyft (Facebook, Instagram and Twitter), this would be used to choose the social media channel with the highest average number of post activities by Lyft. From the comparison of Table 2, Table 3 and Table 4, Twitter appears to be the most active social media channel used by Lyft.

The primary data for the quantitative analysis was collected by fetching Lyft tweets, number of retweets and the number of tweets likes through twitter API from Twitter database. Lyft's tweet data was fetched through twitter's API using R programming language with *rtweet* and *httpuv* package. *Rtweet* is a client for accessing Twitter's REST and Stream APIs, *httpuv* is HTTP and WebSocket server library that provides low-level socket and protocol support for handing HTTP and WebSocket requests directly from within R.

4.2 Average number of posts published by Lyft across social media networks

The main Lyft's social media networks are Twitter, Facebook, and Instagram, there variations in the number on posts published on each social media by Lyft. A quantitative measurement was carried to determine the variations of the number of posts published by Lyft across its four major social media networks

4.2.1 Twitter

The number of tweets published by Lyft on its twitter page was collected by manually counting the tweets, this data was obtained for all the months from 2016 to present.

Table 2 Number of tweets posted by Lyft on its Twitter page

Month	2020	2019	2018	2017	2016
<i>January</i>	23	13	15	60	-
<i>February</i>	11	8	4	27	-
<i>March</i>	-	18	10	55	-
<i>April</i>	-	19	5	31	-
<i>May</i>	-	12	7	29	-
<i>June</i>	-	14	12	25	-
<i>July</i>	-	18	4	16	-
<i>August</i>	-	9	9	7	-
<i>September</i>	-	8	9	16	-
<i>October</i>	-	25	8	17	-
<i>November</i>	-	23	17	7	46
<i>December</i>	-	22	13	11	78

According to Table 2 above, there was no tweet published from January to October in 2016, the first tweet on Lyft twitter page was posted in November 2016. This could simply mean that Lyft joined twitter in November 2016, there was a high number of tweets published in that month (up to 46 tweets in November 2016) and increases to its peak in the following month (up to 78 tweets in December 2016). The number of tweets started decreasing (60 tweets in January 2017).

4.2.2 Facebook

The number of posts published by Lyft on its Facebook page was collected by manually counting the posts, this data was obtained for all the months from 2016 to 2020.

Table 3 Number of Facebook posts by Lyft on its Facebook page

Month	2020	2019	2018	2017	2016
<i>January</i>	5	0	3	4	5
<i>February</i>	4	3	1	5	9
<i>March</i>	-	4	3	9	11
<i>April</i>	-	2	0	4	5
<i>May</i>	-	4	3	3	8
<i>June</i>	-	5	4	4	13
<i>July</i>	-	5	1	2	5
<i>August</i>	-	3	2	1	10
<i>September</i>	-	4	4	3	7
<i>October</i>	-	3	5	3	4
<i>November</i>	-	4	7	2	11
<i>December</i>	-	2	4	7	6

From Table 3, the number of Lyft’s Facebook post in 2016 is the highest compared to 2017 and 2018. This simply implies that Facebook was one of the first social media network Lyft adopted, thus the decreased number of posts in 2017, 2018, 2019 and 2020 when Lyft started adopting other social media networks.

4.2.3 Instagram

The number of posts published by Lyft on its Instagram page was collected by manually counting the posts, this data was obtained for all the months from 2016 to 2020.

Table 4 Number of Instagram posts by Lyft on its Instagram page

Month	2020	2019	2018	2017	2016
<i>January</i>	6	0	1	0	0
<i>February</i>	14	4	1	0	0
<i>March</i>	-	4	0	0	0
<i>April</i>	-	6	0	0	0
<i>May</i>	-	5	1	0	0
<i>June</i>	-	8	1	1	0
<i>July</i>	-	2	0	1	0
<i>August</i>	-	5	0	0	0
<i>September</i>	-	4	1	0	0
<i>October</i>	-	9	1	0	0
<i>November</i>	-	10	1	0	0
<i>December</i>	-	8	0	0	0

Table 3 shows that there was no post on Lyft’s Instagram in 2016, only 1 post each in June and July 2017 and 7 posts altogether in 2018 and the number of posts started increasing from 2019 till present. This implies that Instagram is one of the lately adopted social network by Lyft.

Lyft makes good use of social media with up to 2-5 posts per month on Facebook from the beginning to end of the year, 60 posts per week on twitter, 13 posts per month on Instagram on average. Average number of posts reduces per month towards the end of the year to about 2 posts per month. Twitter has the highest number of posts by Lyft on average, thus the reason why Lyft’s twitter profile was used as the primary source of data for this research study.

4.2.4 Accessing Twitter's Rest and Stream API

Twitter requires a manual approval of a developer account to create an application, AishaTweetStat Twitter application was created upon the developer account approval by Twitter.

App Name

AishaTweetStat

Description

Fetch tweets, number of retweets and number of tweet likes

Website URL

<https://twitter.com/ummieeAishat>

Sign in with Twitter

Disabled

Callback URL

http://127.0.0.1:1410

Figure 12 Information of the Twitter app created for the purpose of this research

rtweet and httpuv packages quietly installed into the R session

```
## install rtweet and httpuv package if not already
if (!requireNamespace("httpuv", quietly = TRUE)) {
  install.packages("rtweet")
  install.packages("httpuv")
}
```

API Key, API Secret, Access Token and Access Token Secret generated from AishaTweetStat Twitter application was assigned to the variable names **api_key**, **api_secret_key**, **access_token** and **access_token_secret** respectively.

```
## load rtweet
library(rtweet)

api_key <- "T*****Z"
api_secret_key <- "X*****d"
access_token <- "8*****3"
access_token_secret <- "W*****R"
```

The app was further authenticated with Twitter server via web browser to start a session in the R programming language environment.

```
## authenticate via web browser
token <- create_token(
  app = "AishaTweetStat",
  consumer_key = api_key,
  consumer_secret = api_secret_key,
  access_token = access_token,
  access_secret = access_token_secret)
```

4.2.5 Fetching Lyft's recent tweets through Twitter's Rest and Stream API

In line with Twitter limitation, 3,240 recent tweets were fetched from Lyft Twitter's timeline as a data frame and assigned to a variable name *lyfttweets*,

```
# Get 3,240 recent tweets on Lyft's twitter timeline
lyfttweets <- as.data.frame(get_timelines(c("lyft"), n = 3240))
```

The fetched data *lyfttweets* was further manipulated using *dplyr* package to filter out information that are not relevant for this research leaving out 155 recent tweets by Lyft and this data was further exported in to a comma-separated value (CSV) file, see Table 5.

```
#Load the filter library to filter out the unnecessary rows from the timeline table
library(dplyr)

lyftdata <- filter(lyfttweets, is_retweet=="FALSE" & is.na(reply_to_screen_name))

#Lyft data to be used for Analysis
lyftdata <- apply(lyftdata,2,as.character)

#Export out the data into a CSV file for further analysis
write.csv(lyftdata, "twtdata.csv")
```

Table 5 shows the filtered and exported primary data comprising the five recent tweets out of the fetched 155 tweets posted by Lyft, numbers of tweet likes and numbers of retweets by Lyft followers. The *tweets* column represents the published tweets, the *favorite_count* column represents number of tweets likes, and the *retweet_count* represents number of retweets for each tweet

Table 5 First 5 recent Lyft tweets out of the 155 Lyft tweet fetched through Twitter API

tweets	favorite_count	retweet_count
"A small act of goodness and kindness can make a difference" -Seattle driver, Eli, delivering donated masks from businesses to local hospitals in need. Know a Lyft driver or rider doing good in your community? Help us say thanks at https://t.co/o4tu6Cv30E . https://t.co/WGhS6b7SO2	88	18
We know Lyft can be a critical lifeline for communities in need. Many people still need help reaching essential services, and many drivers count on this work for extra income. We,ÃÑ√ÿre taking immediate action to help with both. https://t.co/c5s6Z5eWF9 https://t.co/iSUH61BsFj	118	46
To find out more information on how we're supporting the community during this time, and how you can help, please see here: https://t.co/gPfhf18qaD https://t.co/icNnT6LUDx	54	18
Lyft is pausing Shared rides across all markets. The health and safety of the Lyft community is our top priority, and we,ÃÑ√ÿre dedicated to doing what we can to slow the spread of COVID-19. We will continue to monitor the situation closely and base our actions on official guidance.	265	141
During this uncertain time, we all must do what we can to help protect the well-being of our communities. We want to make sure drivers and riders know the best ways to protect themselves, and what Lyft is doing to help. Learn more: https://t.co/fdntRS5riG https://t.co/EgFUDfCIAX	89	30

4.2.6 Creating dependent and independent variables from *lyftdata*

Each tweet was further categorised into nine different types, the tweet types are Advert, Appreciation, Charity, Entertainment, Innovation, Motivation, Politics, Safety and Support. The tweets are carefully and manually assessed to understand exactly what Lyft is trying to achieve with each of the tweets.

Advert: Lyft published some categories of tweets for the purpose of announcing the latest company incentives to increase their number of users, this type of tweets being published in promotions, discounts, commissions etc.

Appreciation: Lyft published this particular type of tweet to thank their drivers and riders either in general or individually, this could be riders or users with outstanding performance.

Charity: Lyft as a company announces their participation in giving back to the community through Twitter, this comes in donations and other forms of charity.

Entertainment: Lyft partners with celebrities who are as well social media influencers to coordinate entertaining activities to engage its followers.

Innovation: Lyft partner with start-ups and leading technology company to develop new ideas with excellent impact to humanity, Lyft announces such a partnership through their Twitter platform to engage it audiences who are more interested in technology innovations.

Motivation: Lyft occasionally inspires with motivational quotes and an inspirational story by some users to keep the audience highly motivated, Lyft uses its Twitter platform to publish this type of tweet.

Politics: Lyft uses its platform to encourage its audiences to exercise their vote power during local and federal elections, occasionally Lyft announces several incentives offer to get its audiences on their way to vote.

Safety: This is the type of tweet Lyft used to show how much they care about the safety of their customers, in every safety threatening situations like gun violence, disease outbreaks etc, Lyft uses its Twitter platform to announce necessary safety measures to keep its customers and audiences safe in times of uncertainty.

Support: Lyft addresses frequently asked questions by its customers through Twitter, this follows up with comments and replies by the users in case if there is any need to further explain the answers to the frequently asked question.

The mean of each number of tweet likes was determined, number of tweet likes was represented with favorite_count in lyftdata table, the number of tweet likes above the mean are categorised as good feedbacks while the number of tweet likes below the mean value are categorised as bad feedbacks.

Table 6 First 5 out 155 Lyft tweet data derived from fetched Twitter API

tweet_type	feedbacks	retweet_count
Charity	Bad	18
Safety	Good	46
Charity	Bad	18
Safety	Good	141
Safety	Bad	30

4.3 ANOVA Methodology

A two-way analysis of variance (ANOVA) test will be adopted because there are two independent variables and one dependent variable in Table 6, the independent variables are *tweet_type* and *feedbacks*, while *retweet_count* is the dependent variable of the Lyft tweet data table. A two-way ANOVA, tests and analyses the effect of the two independent variables on the dependent variable as well as the expected result and their relationship to the result itself. Using ANOVA, we will be able to determine if the result is due to chance or to the factors in the analysis.

4.3.1 Install ggplot2 R package and Import Data to R environment

The first step was the installation of ggplot2 package into the R programming language environment, ggplot2 is a data visualisation system built into R package, it's based on Grammar of Graphics and it works by providing data, mapping the variables in aesthetics and allocating the graphical basics to use.

```
## Install ggplot2 package
install.packages("ggplot2")

## Load ggplot2 package into the R programming language environment
library(ggplot2)
```

The Lyft tweet data was imported into the R programming language environment as a table, the table data was assigned to a name *lyftTwt*, *lyftTwt* data table has three columns namely; *tweet_type*, *feedbacks* and *retweet_count*, *lyftTwt* data type was further changed from factor into numeric and renamed to *data* for simplicity purpose, *tweet_type*, *feedbacks* and *retweet_count* columns are renamed to *twType*, *feedbacks* and *retweet* respectively for simplicity purpose also.

```
## Import data into the R programming language environment
lyftTwt=read.table("lyftData.csv", header = T, sep = ",")

# Correct the retweet_count variable type from factor to numeric
lyftTwt$retweet_count=as.numeric(as.character(lyftTwt$retweet_count))

# Rename the lyftTwt dataset to just "data". Only for my convinience
data=lyftTwt

# Rename the tweet_type dataset to just "twType"
twType=data$tweet_type
```

4.3.2 Create Box plots and Interaction plot

A boxplot, also known as a box and whisker plot, is a way of showing the spread and centre of a data set, measurement of data set spread including interquartile range and

means of the data set, measurement of data set centre including the mean and median of the data set.

A boxplot gives access to five information about a data set:

- The smallest number in the data set (minimum), located at the end of the left whisker
- The first quartile, Q1, located at the far left of the box
- The median, this is located as a vertical line in the centre of the box
- The third quartile, Q3, located at the far right of the box
- The largest number in the data set (maximum), located at the end of the right whisker

The boxplot that shows feedbacks on the tweet types and number retweets was plotted, the plot was assigned to a variable, named *bxp1*

```
#2 Box plots showing the number of retweet of tweet types with their feedbacks
par(mfrow=c(1,1)) # Divide the graphical window into two
bxp1=ggplot(data, aes(x=twfType, y=retweet))+
  geom_boxplot(aes(fill=feedbacks))+theme_bw()+coord_flip()+
  labs(title = " Boxplot showing the feedbacks of tweet types and number of retweets",
        y="Number of Retweets", x="Tweet Types")+
  scale_fill_discrete(name = "Feedbacks")#Boxplot for number of retweets with all tweet types
par(mfrow=c(1,1))
```

The accessible information from the boxplot of the data set was further stored as data frame to a variable, named *bxpTable1*, this table was processed and exported out of the R programming language environment as a Comma-Separated Value (CSV) file

```
bxpTable1=as.data.frame(ggplot_build(bxp1)$data)
twfTypeList=c("AdvertGood", "AdvertBad", "AppreciationGood", "AppreciationBad", "CharityGood",
"CharityBad",
  "EntertainmentGood", "EntertainmentBad", "InnovationGood", "InnovationBad",
"MotivationGood",
  "MotivationBad", "PoliticsGood", "PoliticsBad", "SafetyGood", "SafetyBad", "SupportGood",
"SupportBad")
bxpTable1$fill=sort(unique(twfTypeList))
colnames(bxpTable1)[1]="tweetTypeFeedbacks" # Change the Fill column name to tweetType
bxpTable1 = apply(bxpTable1,2,as.character)
write.csv(bxpTable1, file = "boxplot_retweets_tweet_types.csv")
```

The interaction plot for the number of retweet, showing the combination of all tweet types and feedbacks was plotted

```
# Interaction plot for the number of retweet, showing the combination of all tweet types and feedbacks
par(mfrow=c(1,1)) # Reset the graphical window into one
interaction.plot(x.factor=twfType, trace.factor=feedbacks, response=retweet, fun=mean,
  type="b", legend=TRUE, xlab="Tweet Type", ylab="Number of Retweets",
  pch=c(1,19), col=c("#E7B800", "#00AFBB"))
```


4.3.3 Create a model and do the model diagnostics

A model containing both explanatory variables and their interaction was created, ANOVA was further computed for the model and the model diagnostics was done to check the assumptions

```
#3 Create a model, including both explanatory variables and their interaction. Compute ANOVA for your model.

modell=aov(retweet~twfType+feedbacks+twfType:feedbacks) # Full two way anova model with interactions
modell=aov(retweet~twfType*feedbacks) #Same model, just different syntax
anova(modell) # Shows analysis of variance table

#4 Do the model diagnostics (to check assumptions).
shapiro.test(resid(modell)) # Test the assumption for normal distribution of residuals
```

4.3.4 Check the homogeneity of variance assumption

Homogeneity of variance assumption is an assumption of ANOVA which states that all comparison groups have the same variance.

```
## Check the homogeneity of variance assumption

par(mfrow=c(2,2)) # Divide graphical output into four
plot(modell) # Show diagnostic plots for our final model

bartlett.test(retweet~twfType) # Tests the assumption for homogeneity of variances

#5 Use Tukey's HSD test for multiple comparisons.
TukeyHSD(modell, which = "twfType") # Tukey's multiple comparisons test. Shows us the differences
between every combination of levels
```

5 Results and Discussion

A quantitative analysis was carried out to compare the type of tweets published by Lyft, the number of retweets by Lyft followers, and the type of feedbacks determined from the reaction of Lyft followers on the tweets published by Lyft. A qualitative evaluation was done by listing out the strength, weakness, opportunities and threats of using social media to promote Lyft's business activities.

5.1 Quantitative Analysis

Quantitative analysis is a process of using different kinds of statistical methods to analyse numerical data for the purpose of answering research question and hypothesis such as how, where, what, who, how much etc. (Apuke, 2017). Two-way analysis of variance (ANOVA) test was adopted as the quantitative analysis method because the data to be analysed comprise of two independent variables and one dependent variable.

5.1.1 Create research hypothesis

Hypothesis questions to be answered from the Two-way ANOVA test result are created below:

H0: Number of retweets does not depend on the tweet types

H1: Number of retweets depends on the tweet types

H0: Number of retweets does not depend on the feedbacks

H1: Number of retweets depends on the feedbacks

H0: Number of retweets does not depend on the interaction between tweet types and feedbacks

H1: Number of retweets depends on the interaction between tweet types and feedbacks

5.1.2 Box plots of Lyft tweet data

In Figure 13 there are more taller box plots among tweet types with good feedback, this means that tweet types data like Advert, Entertainment, Motivation and Support that falls into the good feedback category has a low level of closeness. Tweet types like Advert, Appreciation, Charity, Entertainment, Innovation, Motivation, Politics, Safety and Support with bad feedbacks and tweet types like Appreciation, Charity, Innovation, Politics and Safety belongs to the good feedback category shows shorter box plots and this means that the data has a high level of closeness.

Table 7 Table showing the values of information from box plot of Lyft data set

<i>tweetType</i>	<i>ymin</i>	<i>lower</i>	<i>middle</i>	<i>upper</i>	<i>ymax</i>	<i>outliers</i>
<i>Feedbacks</i>						
<i>Advert</i>	1	4.5	10.5	19	30	0
<i>Bad</i>						
<i>Advert</i>	47	192.5	338	489	640	0
<i>Good</i>						
<i>Appreciation</i>						
<i>Bad</i>	0	0	3	9	18	36
<i>Appreciation</i>						
<i>Good</i>	25	25	25	25	25	0
<i>Charity</i>						
<i>Bad</i>	5	13	18	21	32	c(36, 35)
<i>Charity</i>						
<i>Good</i>	28	36.5	50	61.5	65	129
<i>Entertainment</i>						
<i>Bad</i>	7	8	15	23	30	0
<i>Entertainment</i>						
<i>Good</i>	56	64.25	99.5	235	235	544
<i>Innovation</i>						
<i>Bad</i>	4	8	15	20.5	37	0
<i>Innovation</i>						
<i>Good</i>	33	39.5	46	55.5	65	0
<i>Motivation</i>						
<i>Bad</i>	0	5	7	10	16	22
<i>Motivation</i>						
<i>Good</i>	30	31	32	112.5	193	0
<i>Politics</i>						
<i>Bad</i>	15	23	31	34.5	38	0
<i>Politics</i>						
<i>Good</i>	82	82	82	82	82	0
<i>Safety</i>						
<i>Bad</i>	0	0	4	14	30	0
<i>Safety</i>						
<i>Good</i>	26	44.25	45.5	61.75	67	141
<i>Support</i>						
<i>Bad</i>	0	0	0	0	0	c(7, 13, 10)
<i>Support</i>						
<i>Good</i>	49	79.5	110	140.5	171	0

Table header column of the Lyft data set explained below:

- *Ymin* column is the smallest number in the Lyft data set (minimum), located at the end of the left whisker
- *Lower* column is the first quartile, Q1, located at the far left of the box
- *Middle* columns are the median, this is located as a vertical line in the centre of the box
- *Upper* column is the third quartile, Q3, located at the far right of the box
- *Ymax* columns is the largest number in the Lyft data set (maximum), located at the end of the right whisker
- *Outliers* column is the points that lie outside of their expected range

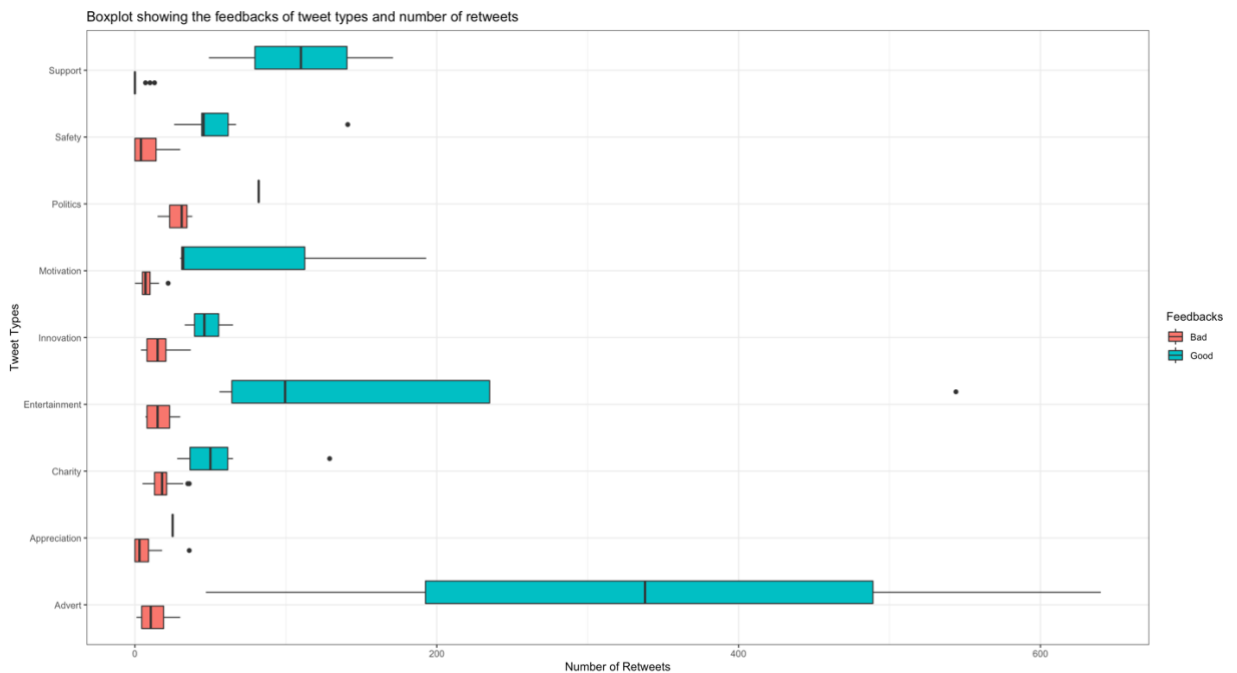


Figure 13 Boxplot showing the feedbacks of tweet types and number of retweets

Advert Tweet Type

The good feedback box plot of the advert tweet type in Figure 14 shows a low level of similarities in the number of retweets, while the bad feedback box plot of the advert tweet type shows a higher level of similarities in the number of retweets. There's an obvious difference between the box plot of the good feedback and the box plot of the bad feedback, the longer whisker to the right of the bad feedback box plot means that the number of retweets of bad feedback are varied among the most positive quartile group and very similar for the least positive group. The box plots of both good and bad feedback of advert tweet type shows different median and different distribution.

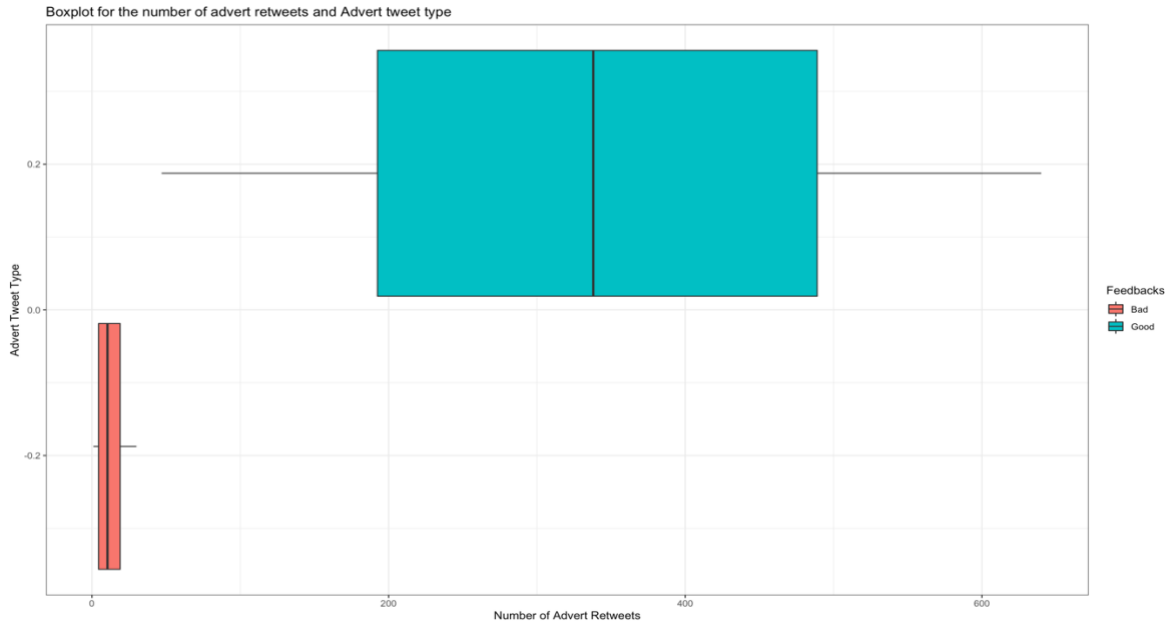


Figure 14 Boxplot showing the feedbacks of advert tweet type and number of retweets

Appreciation Tweet Type

The good feedback box plot in Figure 15 shows no difference in the number of retweets i.e. 100% similarity, while the bad feedback box plot show differences. The number of retweets of the bad feedback box plot are varied the most among the positive quartile group, and very similar for the least positive group. The two box plots show different median and different distribution.

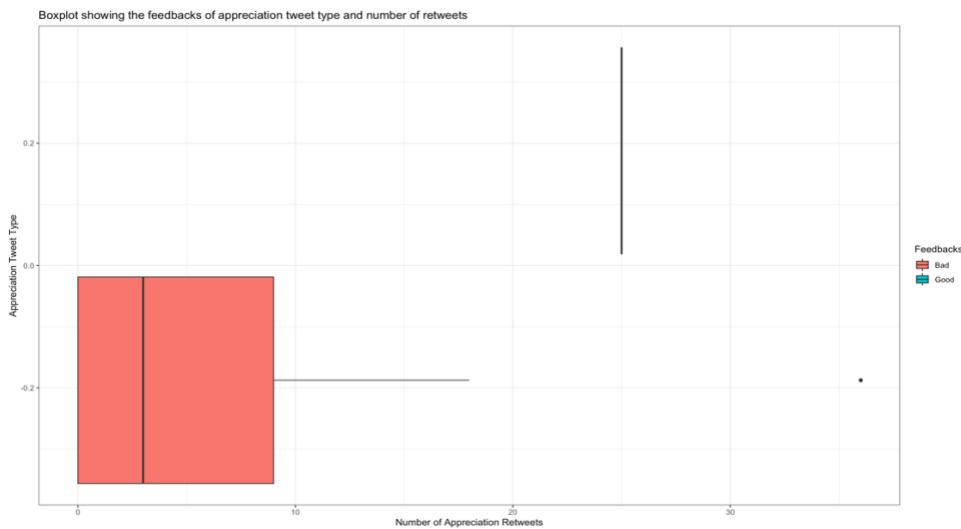


Figure 15 Boxplot showing the feedbacks of appreciation tweet type and number of retweets

Charity Tweet Type

In Figure 16 the good feedback box plot has lesser level of similarity than the bad feedback box lot, the good feedback plot shows number of retweet are similar among the most positive quartile group, while the bad feedback box plot shows number of retweet are

varied among the least positive quartile group. The good and bad feedback plot show different median and different distribution.

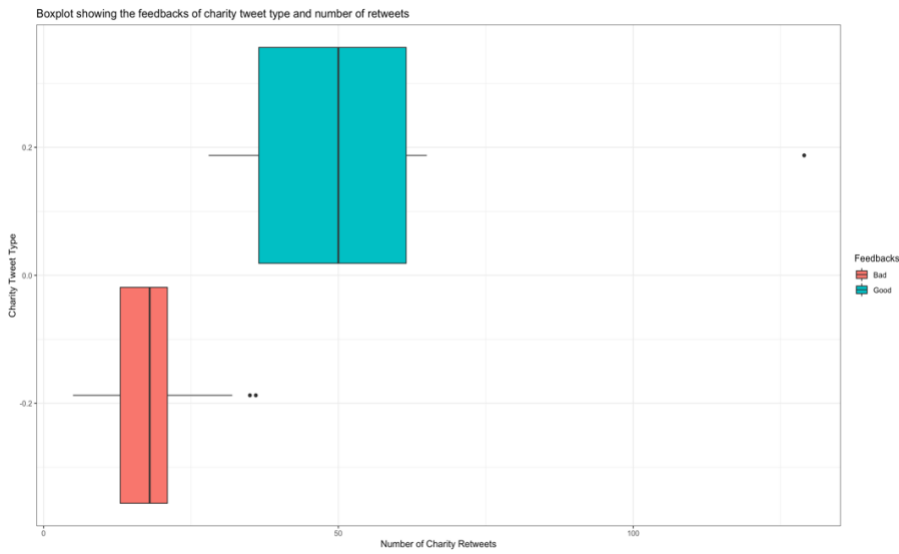


Figure 16 Boxplot showing the feedbacks of charity tweet type and number of retweets

Entertainment Tweet Type

The good feedback plot in Figure 17 shows a lesser level agreement of the number of retweets than the bad feedback, the number of retweet of the good feedback are varied among the least positive quartile group while the number of retweet of the bad feedback are varied among the most positive quartile group. The good and bad feedback show different median and different distribution.

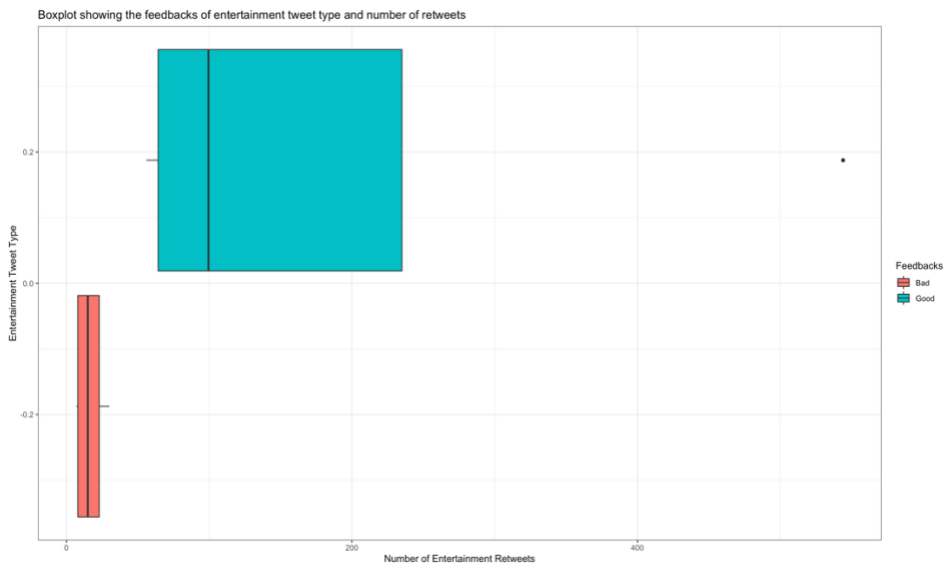


Figure 17 Boxplot showing the feedbacks of entertainment tweet type and number of retweets

Innovation Tweet Type

The good feedback shows a lesser level of similarity in number of retweets than the bad feedback in Figure 18, the number of retweet of the good feedback are varied among the most quartile group and the number of retweet of the bad feedback also varied among the most quartile group. The good and bad feedback show different median and not so different distribution.

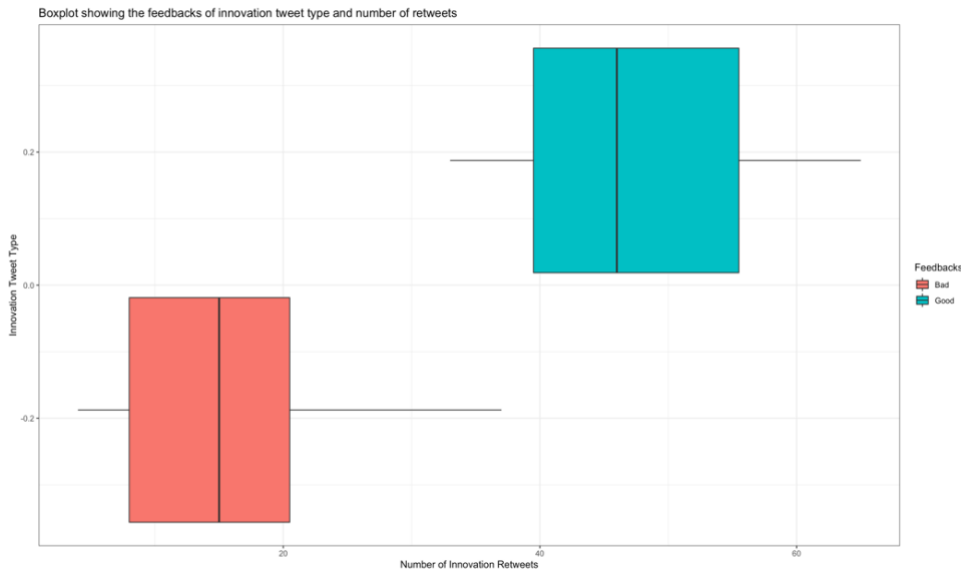


Figure 18 Boxplot showing the feedbacks of innovation tweet type and number of retweets

Motivation Tweet Type

The good feedback box plot in Figure 19 is less similar in number of retweets than the bad feedback box plot, the good feedback box plot are varied more among the most positive quartile group than the bad feedback. The good feedback and bad feedback plots show difference in median and difference in the distribution.

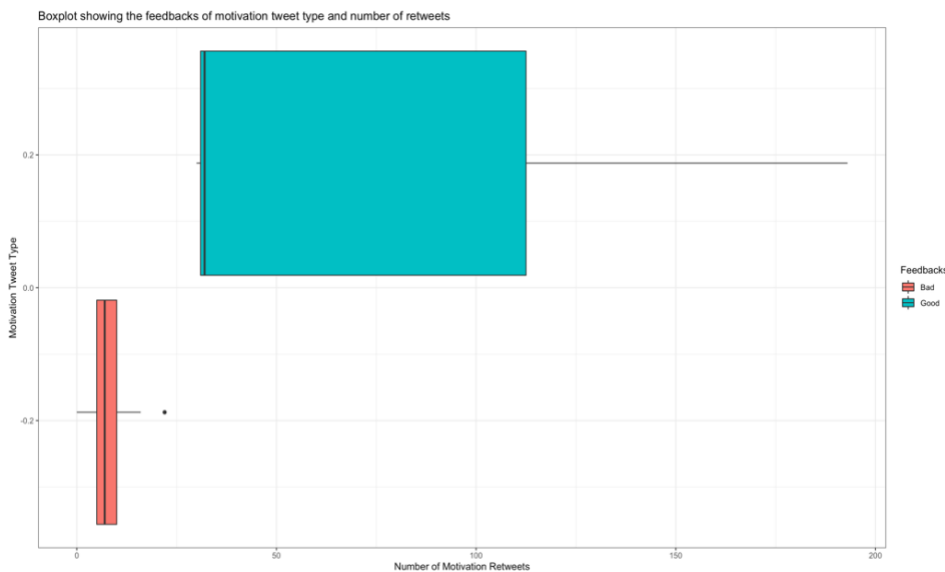


Figure 19 Boxplot showing the feedbacks of motivation tweet type and number of retweets

Politics Tweet Type

The good feedback box plot has 100% similarity in the number of retweet while the bad feedback has less similarity in the number of retweets, the bad feedback is also similar among the least positive quartile group. There is a very high difference in the median and distribution of the good and bad feedback box plots.

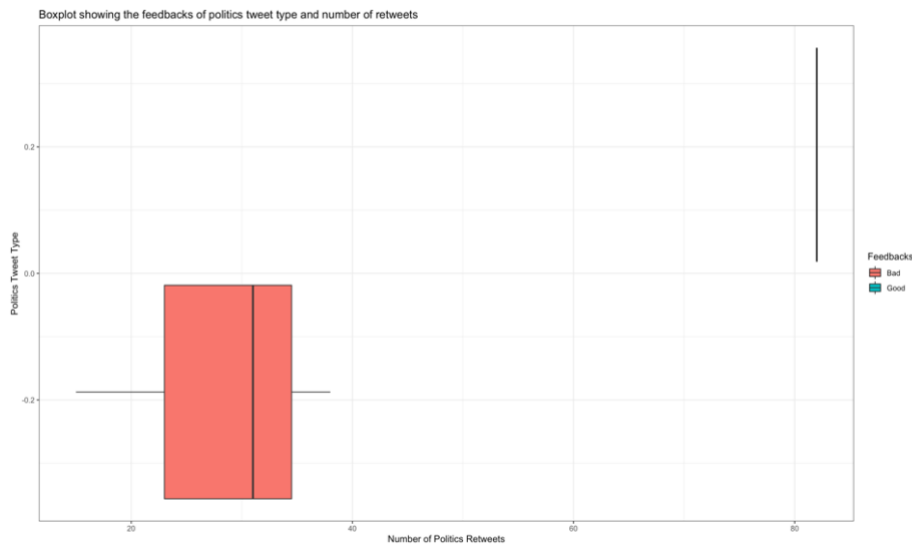


Figure 20 Boxplot showing the feedbacks of politics tweet type and number of retweets

Safety Tweet Type

There is a close similarity in the number of tweets between the good feedback and bad feedback box plot in Figure 21, number of retweets of the good feedback box plots are varied among the least positive quartile group and similar among the most positive quartile group while the number of retweets of the bad feedback box plot are varied among the most positive quartile group and 100% similarity among the least positive quartile group. The good and bad feedbacks are different in median and are similar in distribution.

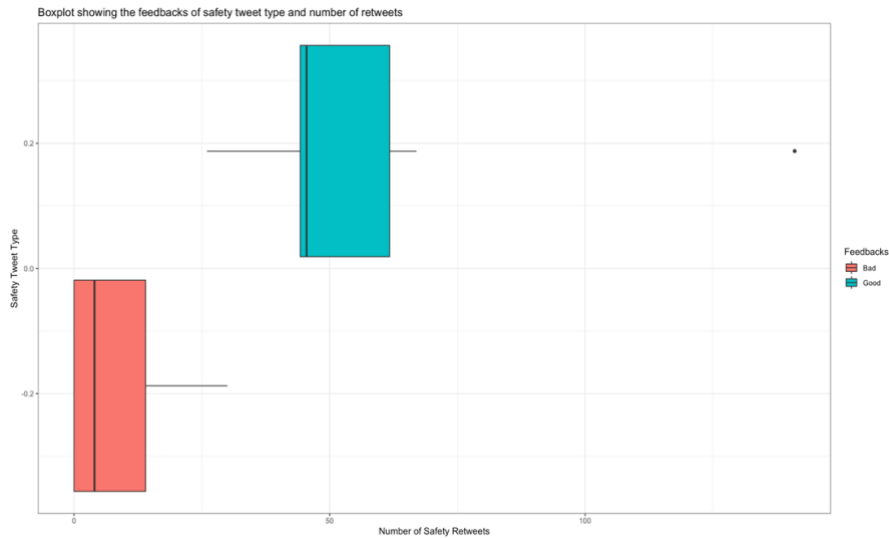


Figure 21 Boxplot showing the feedbacks of safety tweet type and number of retweets

Support Tweet Type

The number of retweets in the good feedback box plot are less similar while the bad feedback box plot has a 100% similarity of 0 number of retweets in Figure 22. The good feedback also shows an equal variation and similarity in the number of retweets of the least and most positive quartile group. There is no median and distribution in the bad feedback box plot, this means there is a very obvious difference among the median and distribution of the two box plots.

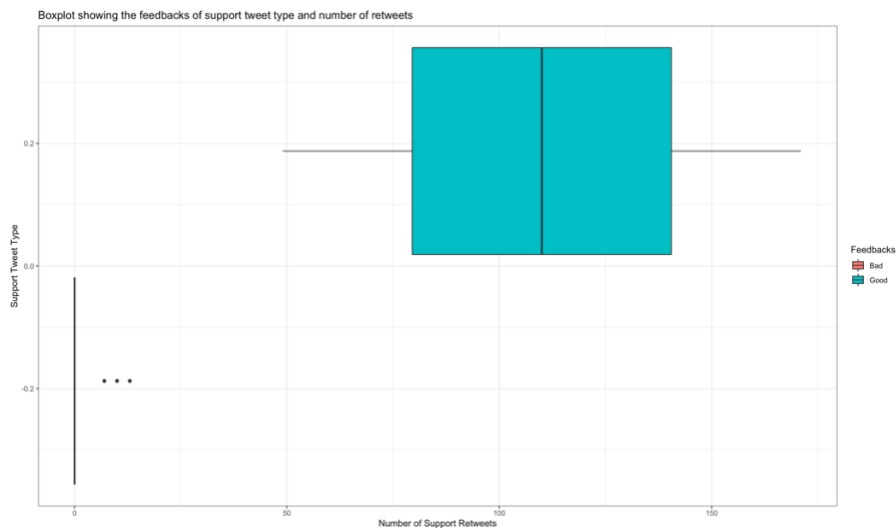


Figure 22 Boxplot showing the feedbacks of support tweet type and number of retweets

5.1.3 Interaction plot of Lyft Tweet Data

Figure 23 plots the mean or summary of the response of two-way combination of feedbacks and tweet types. There is no interaction between the good feedbacks and bad feedbacks made on the number of retweets, advert tweet type shows the biggest difference in the number of retweets between the good and bad feedback, the appreciation tweet types

show the smallest difference between the good and bad feedbacks. The entertainment tweet type shows the second largest difference between the feedbacks followed by support and motivation tweet types. Safety, politics and innovation tweet types show small differences in their number of retweets.

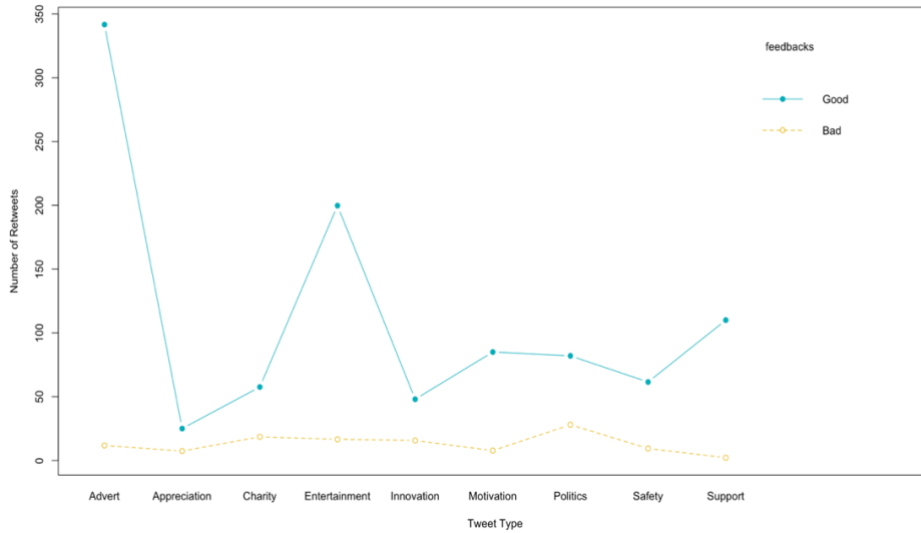


Figure 23 Interaction plot for the number of retweets, showing the interaction between tweet types and feedbacks

5.1.4 Analysis of variance (ANOVA) table and model diagnostics

From the ANOVA table in Figure 24, the P-Values are < 0.05 , Therefore, the tweet types, feedbacks and interaction between tweet types and feedbacks are statistically significant, so we reject H_0 . The statistical significance of the interaction between tweet types and feedbacks indicates that the relationship between feedbacks and number of retweets depends on the type of tweet.

Answers to hypothesis questions

We accept H_1 : Number of retweets depends on the tweet types

We accept H_1 : Number of retweets depends on the feedbacks

We accept H_1 : Number of retweets depends on the interaction between tweet types and feedbacks

Analysis of Variance Table

Response: retweet

	Df	Sum Sq	Mean Sq	F value	Pr(>F)	
twtType	8	63877	7985	2.8306	0.00614	**
feedbacks	1	220783	220783	78.2705	4.010e-15	***
twtType:feedbacks	8	206170	25771	9.1362	5.092e-10	***
Residuals	137	386446	2821			

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Figure 24 Analysis of variance (ANOVA) table of the Lyft tweet data

The model diagnostics test for the assumption that the residual is normally distributed, p-value of the model residual is very low ($< 2.2e-16$), this indicate that we can reject that the Lyft tweet data is normally distributed.

Shapiro-Wilk normality test

data: resid(modell1)

W = 0.4657, p-value $< 2.2e-16$

5.1.5 Check the homogeneity of variance assumption

Figure 25 below shows the Residuals vs Fitted, Normal Q-Q, Scale-Location and Residuals vs Leverage plots, these plots are used to visualize and deduce the homogeneity of variance assumption.

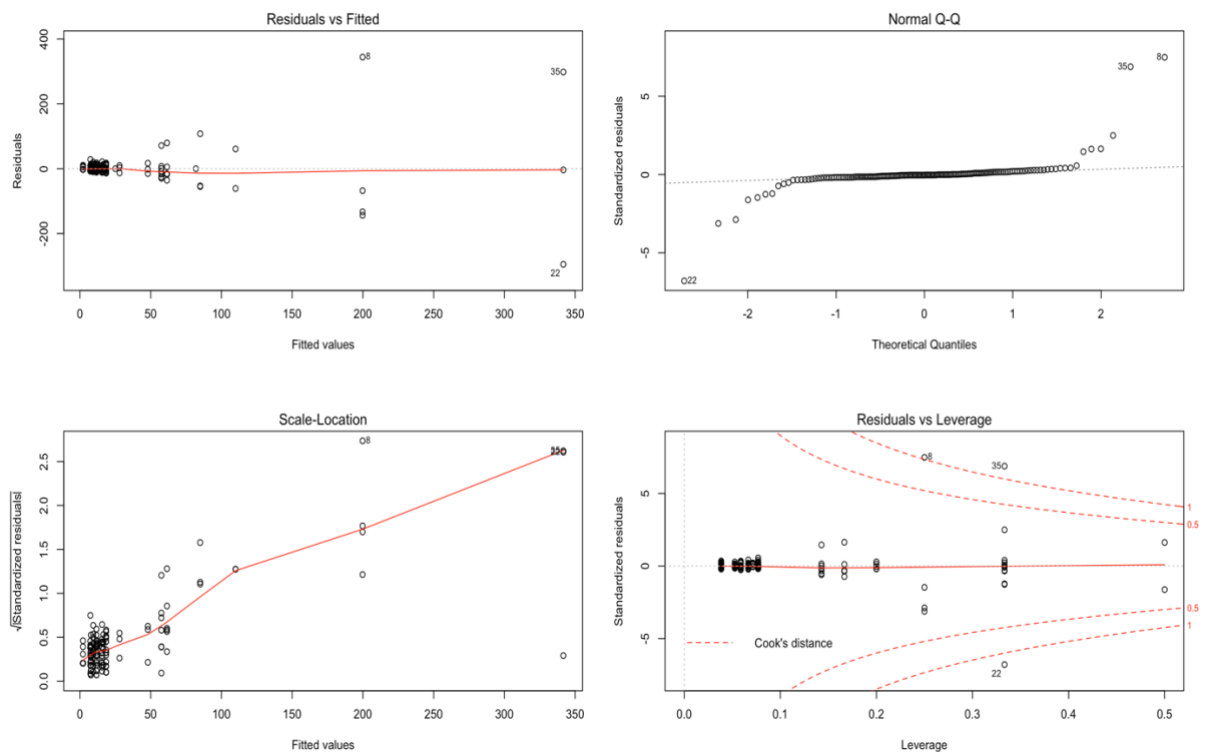


Figure 25 Diagnostic plots for our final model

Residuals vs Fitted plot

The variance is not equal, the residuals are not distributed the same way around the red curve (vertical cuts of residuals do not have the same length throughout x values). The residuals are dependent, because the red line is not parallel to X.

Normal QQ plot

The residuals do not follow the line, the shape of their distribution differs from normal.

Scale-Location

The plot is not close to horizontal, the spread of the magnitudes seems to be lowest in the fitted values close to 350, highest in the fitted value around 0 and medium in the fitted values around 50. This suggests heteroskedasticity.

Residuals vs Leverage

The most influential points are: 8, 22, 35

Bartlett test of homogeneity of variances

This is used to tests the assumption for homogeneity of variances

Bartlett test of homogeneity of variances

data: retweet by twtType

Bartlett's K-squared = 176.18, df = 8, p-value < 2.2e-16

From the output, it can be seen that the p-value of $< 2.2e-16$ is less than the significance level of 0.05. This means that the variance in Lyft tweet data is statistically significantly different for the nine types of tweet.

Use Tukey's HSD test for multiple comparisons

We don't need to perform the test for "feedbacks" variable because it has only two levels, which have already proven to be significantly different by ANOVA test. Therefore, the Tukey HSD test will be done only for the factor variable "twType".

Tukey's multiple comparisons test. Shows us the differences between every combination of levels, from the output in Figure 26 below, it can be seen that only the *Entertainment-Appreciation* pairwise comparisons is significant with an adjusted p-value < 0.05

Tukey multiple comparisons of means
95% family-wise confidence level

Fit: aov(formula = retweet ~ twtType * feedbacks)

\$twtType	diff	lwr	upr	p adj
Appreciation-Advert	-37.219212	-91.699966	17.261542	0.4420506
Charity-Advert	-15.945402	-62.141492	30.250687	0.9750946
Entertainment-Advert	52.137931	-11.738912	116.014774	0.2079489
Innovation-Advert	-24.806513	-75.039104	25.426077	0.8261990
Motivation-Advert	-27.589342	-74.920447	19.741764	0.6573799
Politics-Advert	-4.362069	-93.651462	84.927324	1.0000000
Safety-Advert	-20.019964	-69.430176	29.390248	0.9363405
Support-Advert	-30.237069	-82.370843	21.896705	0.6635071
Charity-Appreciation	21.273810	-35.024332	77.571951	0.9571719
Entertainment-Appreciation	89.357143	17.833349	160.880937	0.0040324
Innovation-Appreciation	12.412698	-47.242269	72.067666	0.9992019
Motivation-Appreciation	9.629870	-47.603298	66.863039	0.9998347
Politics-Appreciation	32.857143	-62.053330	127.767616	0.9746378
Safety-Appreciation	17.199248	-41.764903	76.163399	0.9915262
Support-Appreciation	6.982143	-54.282304	68.246590	0.9999917
Entertainment-Charity	68.083333	2.649556	133.517111	0.0346443
Innovation-Charity	-8.861111	-61.059208	43.336986	0.9998233
Motivation-Charity	-11.643939	-61.056101	37.768222	0.9980470
Politics-Charity	11.583333	-78.826422	101.993089	0.9999794
Safety-Charity	-4.074561	-55.481732	47.332609	0.9999995
Support-Charity	-14.291667	-68.321830	39.738497	0.9956238
Innovation-Entertainment	-76.944444	-145.287796	-8.601093	0.0151198
Motivation-Entertainment	-79.727273	-145.967246	-13.487299	0.0066833
Politics-Entertainment	-56.500000	-157.098689	44.098689	0.7014548
Safety-Entertainment	-72.157895	-139.899090	-4.416699	0.0274598
Support-Entertainment	-82.375000	-152.127641	-12.622359	0.0085263
Motivation-Innovation	-2.782828	-55.988055	50.422399	1.0000000
Politics-Innovation	20.444444	-72.092891	112.981780	0.9987680
Safety-Innovation	4.786550	-50.276430	59.849529	0.9999990
Support-Innovation	-5.430556	-62.950057	52.088946	0.9999981
Politics-Motivation	23.227273	-67.767666	114.222211	0.9965777
Safety-Motivation	7.569378	-44.860118	59.998874	0.9999483
Support-Motivation	-2.647727	-57.651485	52.356031	1.0000000
Safety-Politics	-15.657895	-107.751403	76.435614	0.9998212
Support-Politics	-25.875000	-119.457988	67.707988	0.9940807
Support-Safety	-10.217105	-67.019825	46.585614	0.9997274

Figure 26 Tukey multiple comparisons of means

5.2 Qualitative Analysis

This is type of analysis that has to do with the analysis of data which cannot be quantified. The qualitative data analysis is subjective judgement on non-quantified information (Snelson, 2016).

5.2.1 SWOT Analysis

SWOT analysis tool help to understand the strategic planning and strategic management in an organization. It can be used to effectively build organizational strategy which focuses on the internal strength and weakness and external opportunities and threats faced by the organization from its suppliers or competitors. (Gürel, 2017).

For the purpose of this research, the SWOT analysis are as follows:

Strengths

- Lyft drivers undergoes deep background verification to ensure no trace of any type of illness and criminal check.
- Less time for customers to wait for their ride because Lyft has many drivers
- Lyft cars are easily recognized because of the “huge pink moustache” on the front of the cars. Which is the brand’s symbol.
- Lyft mobile application is user friendly and available on both android and iOS
- The travel fare is at reduced rate compared to public transport

Weakness

- Lyft only gets 20% of the fide fare which makes Lyft’s profit pretty limited
- To use the mobile application, smartphone is needed and not everyone has a smartphone
- Competitors have more drivers than Lyft
- Drivers background check does not guarantee customers safety
- Lyft is constantly attacked by uber

Opportunities

- High demand for Lyft in many cities and even international expansion
- Availability of smartphones makes it possible for Lyft usage and this help increase Lyft revenue
- Lyft is great at night especially for students or people who stays out late
- Lyft offers bonuses to attract more drivers and increase number of available rides
- Lyft offers transportation to the airports or train stations at cheaper rate

Threats

- Lyft can easily be copied
- Lyft’s drivers leaving and joining Uber and other carsharing company which decreases the number of riders for Lyft
- The big competition is new companies with similar ideas surfacing and also existing company

6 Conclusion

This research study shows that, businesses such as Lyft are more active on twitter because of the platform's openness, almost all conversations on twitter are open and this is gives a higher level of trust to the business by the customer, it shows that the customer develops the thought of knowing that the business have nothing to hide. An open communication with customers gives new customers information about the business treats its old customers, that can be used as a form of review for the business.

I will further propose that Lyft should make use of Twitter API for enterprises to synchronize a live review of riders and drivers after every completed ride, this will additionally build more trust in to the customers.

This study shows that users of ride sharing services are mostly interested in advertisement content which comprises of promotions and offers to make the services as affordable as possible, I will propose that Lyft should always come up with competitive discount and promotions content for its users. There is a lot more of interest in entertainment content after the advert for the users, Lyft should engage more celebrities who are social media influencer from the music and movie industry to advertise every latest promotions and discounts to be offered by Lyft.

I will as well propose that Lyft should invest its resources such as employee and capital according in this prioritized order; Advert, Entertainment, Support, Motivation, Politics, Safety, Charity, Innovation and Appreciation. This study also shows a high difference between the good feedbacks and bad feedbacks in the number of retweets of all the tweet types, this discovery makes it worthy to put the result from this research into further statistical investigation.

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