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MSc Data Analytics

Cohort B

WhatsApp ! a messenger giant.

1. Background

Connecting the world, making communication easier and cost efficient has been a motto of many companies since 1998 when the first communication platform Yahoo! Messenger was developed. Several social media platforms created different messengers in order to improve the communication platform by adding different and multiple features to it. Social media and messengers like Facebook messenger, iMessage, Twitter, Skype, Snapchat and Viber made their presence in the market of this communication platform but WhatsApp developed in 2009 changed the level of competition. It is the world leader in messengers as in 109 countries examined 55.6% of people use whatsapp messenger (Anderson, 2016). This study has been carried out on what makes Whatsapp remains the most favourable, most used and popular app amongst its competitors and retains its top status. Various facts were visualised by collecting the data and an infographic was created and named Whatsapp! A messenger giant. The data was gathered from different sources as follows :

Data sources :

1. Which service is used the most on a mobile phone for messaging?
(source : <https://www.statista.com/statistics/279605/most-used-instant-messaging-services-on-mobile-phones/>) This data shows the most used messengers used by the users. The data downloaded from this source was in XLS format. The data was visualised by comparing different messengers against the usage of it.
2. Age distribution of Whatsapp users
(source : <https://www.statista.com/statistics/290447/age-distribution-of-us-whatsapp-users/>) The data shows the age distribution of Whatsapp users by the number of usage of the app. The data was gathered in XLS format.
3. Usage of Whatsapp features by the users in billions.
(source : <https://www.paymill.com/en/blog/key-facts-whatsapp/>) The data of different features of whatsapp such as messages, voice call, video call and pictures

sent were gathered and an excel file was created to visualise it. Some information in it were used as facts in the info graph.

4. Selected countries in which population is active on whatsapp in 2017
(source: <https://www.statista.com/statistics/291540/mobile-internet-user-whatsapp/>) The data consists of popularity of Whatsapp in online markets in the world in 2017 by countries. A visualisation was created to measure the popularity of whatsapp in online markets by countries.

2. Process :

1st step : Identification of the topic :

The primary need of creating an infographic is to find a topic whose statistics differ from the ordinary and which make an impact on the world can be addressed on to a canvas. The topic for this infographic is Whatsapp a messenger giant, which gives us the information about how whatsapp is most favoured in usage and interesting features and facts of it making it a leader amongst its other competitors.

2nd step : Data collection :

The data was collected from a source named Statista and a blog of which the links and the content of data are discussed in section 1 (Background).

3rd step : Cleaning and transformation :

After gathering the data, there were some NA values which needed to be cleaned from the XLS files. The unwanted columns and data were removed as per the need of the infographic.

4th step : Loading the data in visualization tools :

The XLS file was imported in the visualization tool called Power BI and using the get data tab and choosing the sheet which was needed to be visualised.

5th step : Selecting suitable visualizations and importing in infographic :

To narrate an impactful story and facts, appropriate visuals need to be selected so that the data collected can be turned into knowledge. The infographic should contain visuals in a pattern of a story which creates a genuine interest about the topic in user's mind.

3. Specification :

This infographic reveals how Whatsapp is popular in different categories, strength and key insights of the messenger making it a leader amongst its other competitors.

The first infographic reveals the popularity of Whatsapp amongst the other messengers in 2013. With the statistics of popularity in hand the usage of the messengers can also be linked as the greater the popularity the greater is the usage. A donut chart is created to show the statistics between the different messengers. It is seen that whatsapp has the highest popularity with 50, followed by Facebook messenger with 42 and the rest are less popular by decreasing numbers. Moving on with popularity and usage there are some facts which shows the flexibility of whatsapp by operating the messenger in 40 different languages with 1.5 billion users to handle across 180 countries. The major contributor for this popularity and usage can be determined with another infographic which consists of usage of Whatsapp by age. A funnel chart was created and can be seen that people in age of 25-34 years are contributing the most but not very much in difference with the age group of 35-44 years having numbers 28 and 26 respectively. The key insight was the young age group of 18-24 years contributes less in number than expected because young generation are more used to chatting and social media stuff. For handling this huge popularity and usage with different features an interesting fact or insight is just 55 employees are responsible for handling this messenger. Fearing this competition Facebook bought whatsapp for 19 billion dollars. Apart from this, Whatsapp has some features which makes it the most dependable and usable app like voice calling, messages sent, video calls and pics sent having stats of per day. This infographic clearly shows that the voice call feature having 100 billion calls per day is mostly used and followed by the other features. Another interesting fact about Whatsapp is women tend to use it more than men. Another infographic shows that the app is also used as an online marketing purpose in various countries. In 2017, Saudi Arabia used it the most and Canada was the least as seen in the world map graph created.

4. Justification:

Techniques : When an infographic is created, selection of appropriate visuals becomes very important to show the data pictorially. The first visualization is a donut chart which represents the popularity of messengers in numbers. The reason for choosing donut chart was the data present in categories and shows the top messengers and their popularity in numbers which makes it very easy to understand. The second visualization is a funnel graph for age wise usage of Whatsapp. Funnel charts are used to showcase the stages of the problem or data which can be analysed. Here the usage can be analysed according to the stages of an age groups. The next visualization is about features of Whatsapp, analysing which is the most used feature. A bar chart is used to depict the categorical data and the categories are compared. Here the features of Whatsapp are compared with voice calling being the most used feature with 100 billion calls per day. The next visualisation is a map

created to show the popularity of Whatsapp in online markets in 2017. The map visual gives the clear idea country wise popularity with Saudi Arabia and Brazil being the highest and Canada lowest. The data consisted of countries which motivated to create a map graph.

Layout : An online tool Canva was used to create the layout of this infograph. It was chosen because of the recommendation given and it had many features which helped in improving the quality of infograph and the visualizations created in different softwares. A blank template from Canva was taken which had no ready visualizations. The visualizations were made as per the knowledge gained the course curriculum and applying it on different tools. After creating the visuals, with the help of snipping tool a feature of windows helped to take the screen shots in .png format at were inserted into the infograph as per the story. Also a website called Flaticon consisted of creative clip arts which enhanced the meaning of facts written in the infograph. Some icons from Canva were also used to depict some information related to facts inserted. Canva also provided features like adjusting the images at the appropriate positions and variety of fonts for titles and the normal text which would make it eye grabbing. The layout was set to an A3 size paper of the dimensions 842 x 1191.

Style : The font sizes differ as per the titles and the text which is made on purpose to distinguish between the facts written and the title. The font of the main title is Exo and is coloured green keeping in mind the theme colour of Whatsapp. Some facts which consists of figures have a large font to grab the attention of the viewer. For example the fact of 1.5 billion users using this messenger is a huge number hence the number is depicted in large font. There are also some clip arts which were used as symbols which relate to the context and the meaning can be interpreted easily. Taking the example of gender the male and female can be understood easily. These clip arts were taken and used from Canva and Flaticon.

Colour : Each colour has its importance and significance of the use. The title is coloured green as the whatsapp theme and logo is in the same colour. The colours used for genders also are signified with pink mostly used for females and men for the blue. The rest of the sheet is present with a black background and a white text on it which makes it easier to read and is less stressful for the eyes even if some person is reading in dark environment.

5. Technologies :

Power BI, Excel, Flaticon and Canva were used to create this infographic.

- Power BI : The donut chart for popularity of whatsapp, the funnel chart of age-wise distribution of usage of whatsapp and the bar chart for the different features of Whatsapp were created using this tool.

- Excel : The world map for popularity in online markets was created using excel which had the same background colour of the template.
- Flaticon and Canva were used for the clip arts of different facts.

6. Reflection : The most tedious task was to find the data according to the story and some facts which would make it interesting for the viewer. Arranging the visuals in an A3 format according to the story was a challenge where tools were used to adjust the size for the images. After creating this infograph, the learning curve was increased in the aspect of importance of colour in visualization and data presentation.

7. References :

1. Anderson, K. E. (2016). Getting acquainted with social networks and apps: WhatsApp -ening with Mobile Instant Messaging?
2. Tole Sutikno, L. H. (2016). WhatsApp, Viber and Telegram: which is the Best for Instant Messaging? *International Journal of Electrical and Computer Engineering (IJECE)* , 909~914.
3. https://www.flaticon.com/free-icon/whatsapp_220236#term=whatsapp&page=1&position=8 (icon made by Smashicons from Flaticon)
4. Icon made by [https://www.flaticon.com/free-icon/speak_512500#term=speaking&page=1&position=1] from Flaticon
5. Icon made by [https://www.flaticon.com/free-icon/feedback_1484584#term=feedback&page=1&position=17] from Flaticon
6. <https://www.paymill.com/en/blog/key-facts-whatsapp/>
7. <https://uxmovement.com/content/when-to-use-white-text-on-a-dark-background/>