



CAPSTONE PROJECT

“Working with Data”

on

**“Social Media: Connecting and Disconnecting
people”**

University of Petroleum and Energy Studies



Submitted by:

Name: Dhruv Gupta

Under Guidance of

Mr. Ravindra Singh Rawat
(School for Life)

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Chapter -1

Introduction to the Problem

1. Introduction to the Problem.

Social media. What thoughts do these words provoke in one's mind? Most of us would assume texting people, usually friends, family, etc., or sharing about one's life. Social media did not achieve mainstream popularity until about ten years ago. Facebook, Instagram, and similar services are becoming the most visited destinations on the internet. These websites allow users to quickly and easily share pictures, links, ideas, and messages with other users. In this day and age, it is pretty difficult to imagine our lives without social media. The modern lifestyle is very fast-paced, where one doesn't have the time or energy to connect with people anymore, social media acts as the bridge, that helps people to re-establish the connection they lost. Social media also acts as a voice for people. A voice that cannot be silenced. Every platform has users that have amassed thousands of people on their accounts through their ideologies, their talents, etc. These platforms have communities built around them, where people look out for each other. An 'online friend' that sometimes, is closer to them than their family. Therefore, we can say that social media plays an integral cog in this clockwork of modern life. But is it too much of a necessity, to the extent that it started governing people's lives? Every day, people post about their lives on such platforms, even though they are seldom true. But we cannot assume data about everyone, or else this wouldn't have been a data analysis. We have gathered data from various social media users from all over India. Ranging from adults to kids, this data is the representation of people's social media usage. And we've found an interesting trend among people that we'd like to show through this data analysis.

Chapter-2

Data Set & Data Collection Techniques

2. Data Set & Data Collection Techniques

There are two main ways to collect data, primary and secondary. The primary way involves making an online survey that would help us to record responses from thousands of users and compile that data for analysis. The secondary way involves collecting data from already existing surveys and compiling the data for analysis. We considered going with the primary way, but couldn't get a sufficient number of responses and were not able to get the data over a wide range of ages. Therefore, we decided to take a pre-existing dataset. We got this dataset from Kaggle.com. Luckily, this dataset had over a thousand responses which were more than sufficient to perform a proper data analysis. The data set contains the following variables:

- Age
- City
- Current employment status
- Does the person multiple Instagram profiles
- Gender
- Location/Zone
- Number followers on Instagram
- Number of posts on Instagram
- Time spent on Facebook in a week
- Time spent on Facebook on a weekend
- Time spent on Instagram in a week
- Time spent on Instagram on a weekend
- Time spent on WhatsApp in a week
- Time spent on WhatsApp on a weekend
- Total Facebook usage
- Total Instagram usage
- Total WhatsApp usage
- Total week usage
- Total weekend usage
- Total Social media usage

With the help of these variables and the data entries, we were able to conduct a successful data analysis.

Tools used for interpretation of data- pivot chart, pivot table, bar graph, sorting, filter, average function, pie chart, sum, division, round off, using filter and graph in pivot table, Color filter, Color sort, etc.

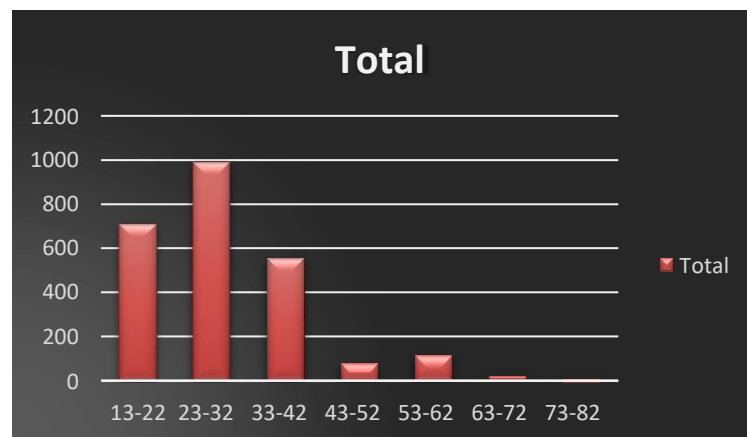
Chapter-3

Data Analysis & Interpretations

3.Data Analysis & Interpretations

3.1 Followers on Instagram by age

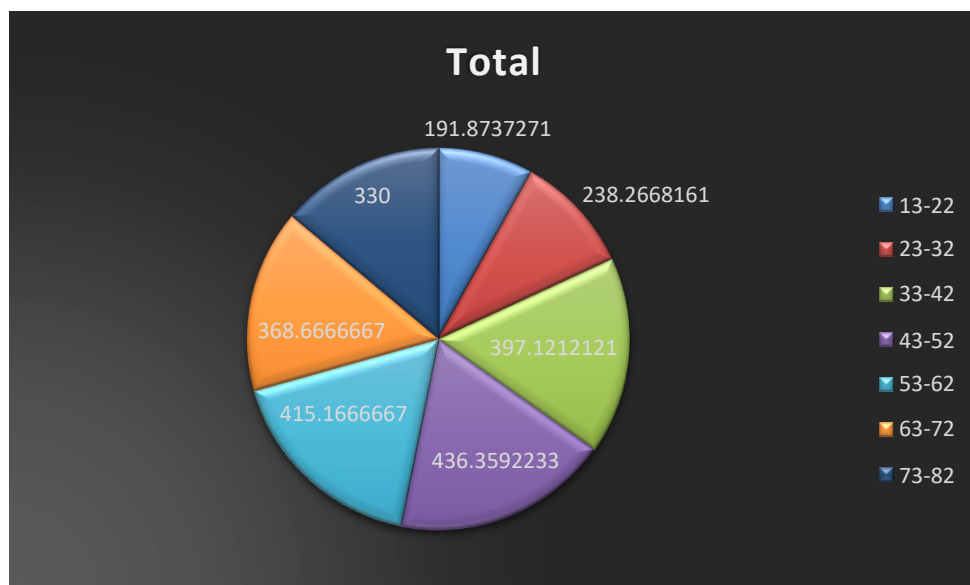
Row Labels	Average of How many followers do you have on Instagram? (In case of multiple accounts, please mention the one with the maximum)
13-22	709
23-32	990
33-42	555
43-52	76
53-62	112
63-72	18
73-82	10
Grand Total	797



From the graph, we come to know that the people between 23-32 have more followers on Instagram, compared to the older age groups. The next age group that has a high average number of followers on Instagram is 13-22, followed by 53-62, 43-52, 63-72, and finally 73-82. A possible reason why we are seeing this trend is because Instagram's features and designed catering more towards the younger generation

3.2 Average Facebook usage by age

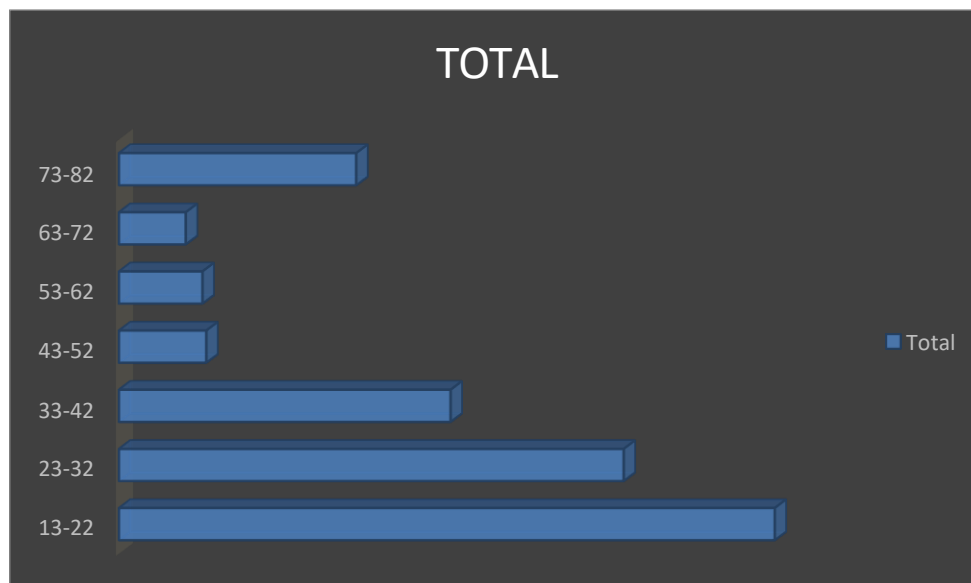
Row Labels	Average of Total Facebook Usage
13-22	191.8737271
23-32	238.2668161
33-42	397.1212121
43-52	436.3592233
53-62	415.1666667
63-72	368.6666667
73-82	330
Grand Total	250.9164619



From the graph, we can see that the Facebook is popular among the people between the age group of 43 and 52, closely followed by people between the ages of 33-42 and 53-62. Facebook becomes less and less famous as we go down the ages, with only 8% usage among 13-22 year old's and 10% usage among 23-32 year old's. From this data we can see a trend, Facebook is better suited towards older people and therefore, they prefer Facebook over Instagram. We can also conclude that the people of this age group were very new to all the social media thing, and facebook was probably among the first social media applications to be used by people, so the people of this age group are a bit reluctant to experiment on different social media applications, hence, being comfortable and connected with the people they know, they prefer to use Facebook.

3.3 Average Instagram usage by age

Row Labels	Average of Total Instagram Usage
13-22	940.5580448
23-32	723.6513453
33-42	475.2424242
43-52	125.0679612
53-62	119.5555556
63-72	95.66666667
73-82	340
Grand Total	720.1842752

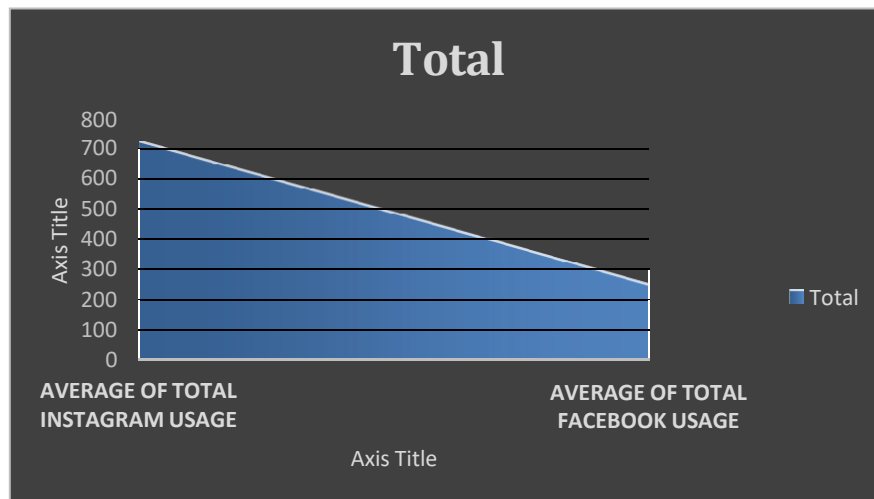


We interpret that, on average, people between 13-22 years are more likely to use Instagram, compared to other age groups. This is also an indication of their higher social engagement. This age group includes people from teenagers to young adults. A reason for this particular trend might be peer pressure. Shortly after are people between the ages of 23-32 that have a high Instagram usage. The main reason for this might be because people like to stay in touch with their past friends.

3.4 Average Instagram and Facebook usage

Values

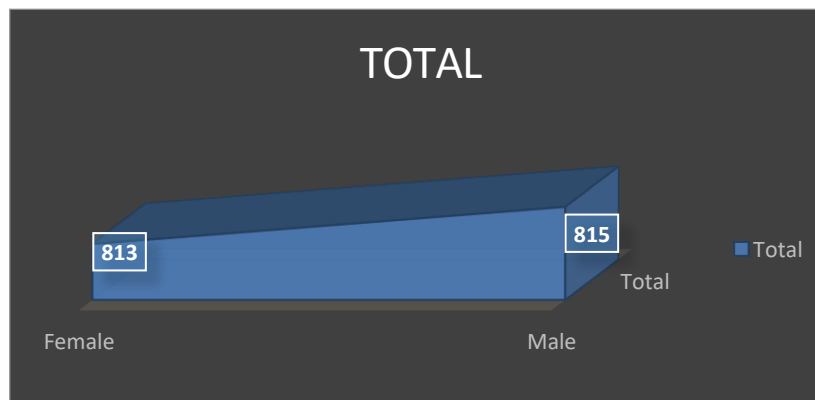
Average of Total Instagram Usage	720.1842752
Average of Total Facebook Usage	250.9164619



Since the past years, we've observed that people prefer using Instagram over Facebook. We generally see people between the ages of 40-55 use Facebook more, whereas, teenagers to people in their mid-30s tend to use Instagram more, as we can see in the graph. In conclusion, the average number of Instagram users is over 700 whereas the average number of Facebook users is around 300.

3.5 Gender-wise Social media usage

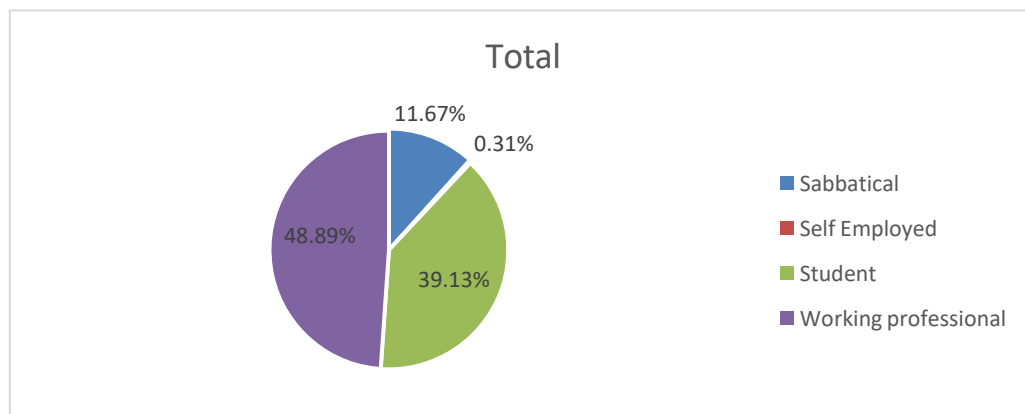
Row Labels	Count of Total Social Media Usage
Female	813
Male	815
Grand Total	1628



From the graph we can, conclude that the ratio of the number of males using social media is slightly higher than that of females and this can be true because males tend to use social media to gather information, contacts, they also tend to be more business-minded in their approach and are more likely to follow pages related to business.

3.6 Social Media usage based on employment

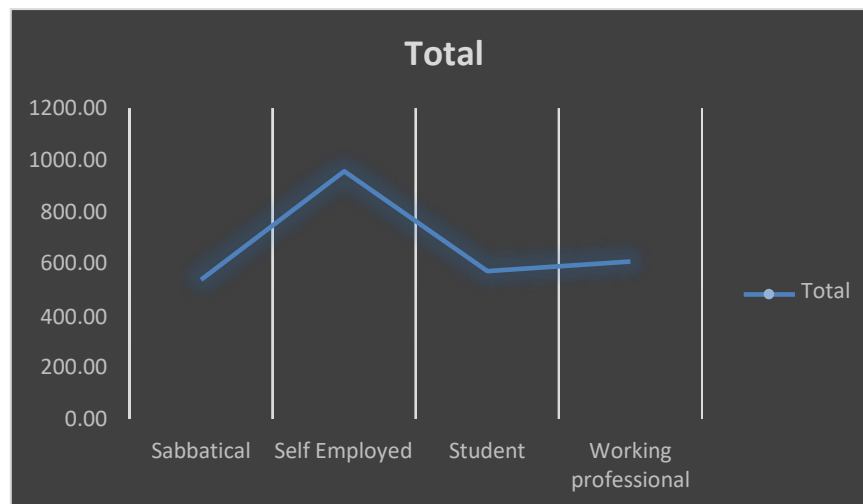
Row Labels	Count of Total Social Media Usage
Sabbatical	11.67%
Self Employed	0.31%
Student	39.13%
Working professional	48.89%
Grand Total	100.00%



The current graph shows us the ratio of the people with different employment statuses with their social media usage. According to our pie chart, social media is mostly used by the working professionals which is about 48.89%, followed by 39.13% of the students, followed by sabbaticals with 11.67% and lastly, the self-employed people with 0.31%.

3.7 Social Media usage on a weekend based on employment

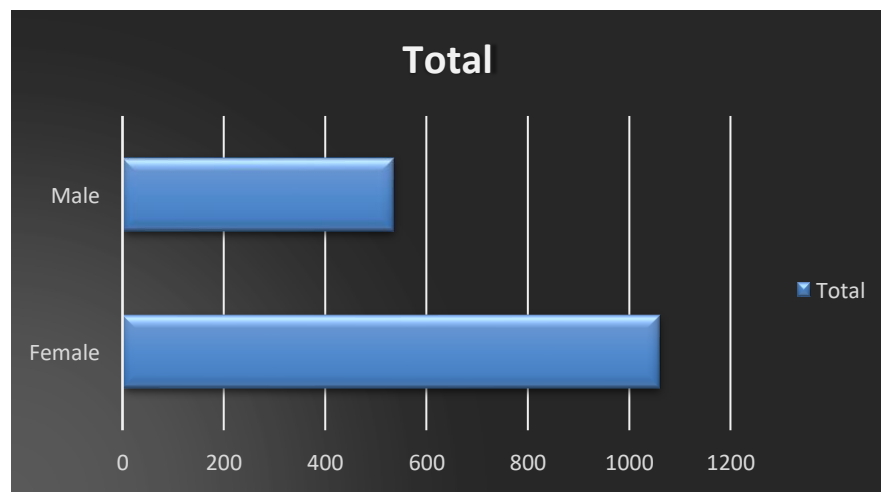
Row Labels	Average of Total Weekend Usage
Sabbatical	536.93
Self Employed	956.00
Student	570.43
Working professional	607.07
Grand Total	585.62



The current graph shows us the ratios between the people of different statuses with their average social media usage on weekends. According to our graph, on weekends the data gets changed if we compare it with total social media usage. This time the people who are self-employed use the social media most with 956 minutes, then come the working professionals with 607.07 minutes, followed by students with 570.43 mins and at last the sabbaticals with 536.93 minutes of usage on weekends.

3.8 Instagram Followers based on Gender

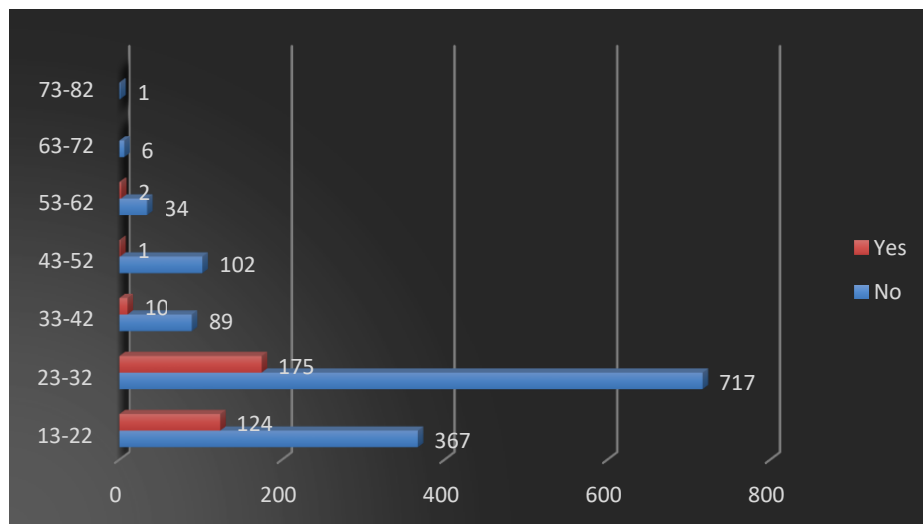
Row Labels	Average of How many followers do you have on Instagram? (In case of multiple accounts, please mention the one with the maximum)
Female	1060
Male	535
Grand Total	797



The current graph shows us the ratio of the average number of followers on Instagram between males and females. So according to our study, female Instagram users have more followers than males.

3.9 No. of Instagram accounts

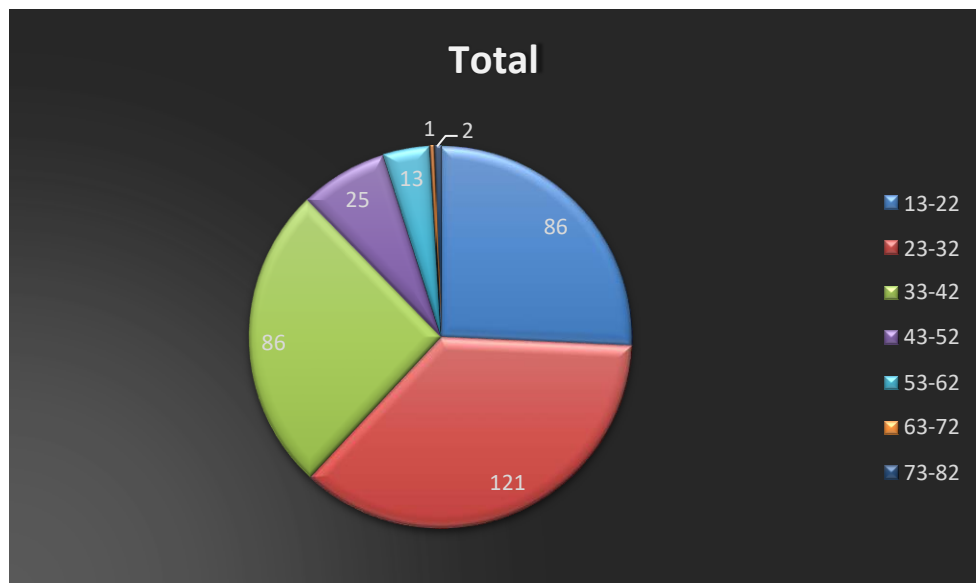
Count of Do you own multiple profiles on Instagram?	Column Labels		Grand Total
	No	Yes	
Row Labels			
13-22	367	124	491
23-32	717	175	892
33-42	89	10	99
43-52	102	1	103
53-62	34	2	36
63-72	6		6
73-82	1		1
Grand Total	1316	312	1628



From this graph, we can conclude that majority of people, from all age groups, have a single account on Instagram.

3.10 No. of posts per age group

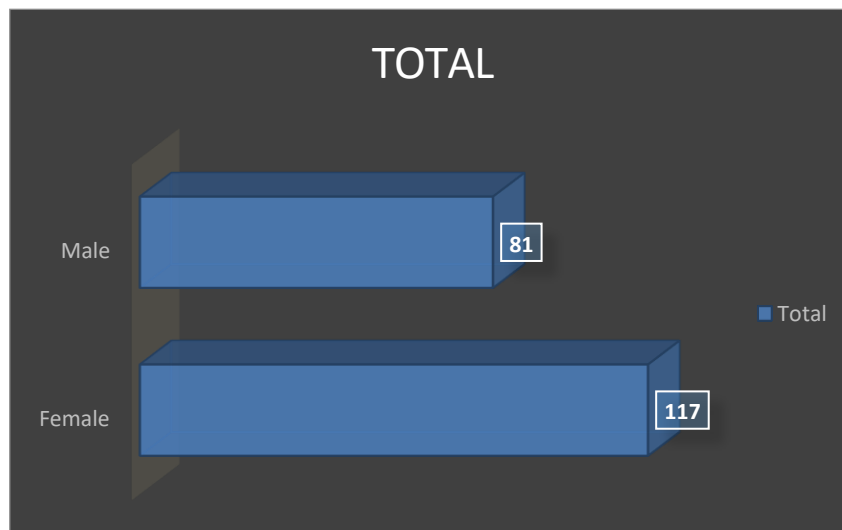
Row Labels	Average of How many posts do you have on Instagram?
13-22	86
23-32	121
33-42	86
43-52	25
53-62	13
63-72	1
73-82	2
Grand Total	99



This pie chart shows that the people of age group 23-32 have the maximum number of posts and it decreases as we move to older age groups. They like to update everything that is going on in their lives, and post whenever they travel somewhere, and sometimes, also on matters of social importance, etc.

3.11 Posts on Instagram by gender

Row Labels	Average of How many posts do you have on Instagram?
Female	117
Male	81
Grand Total	99

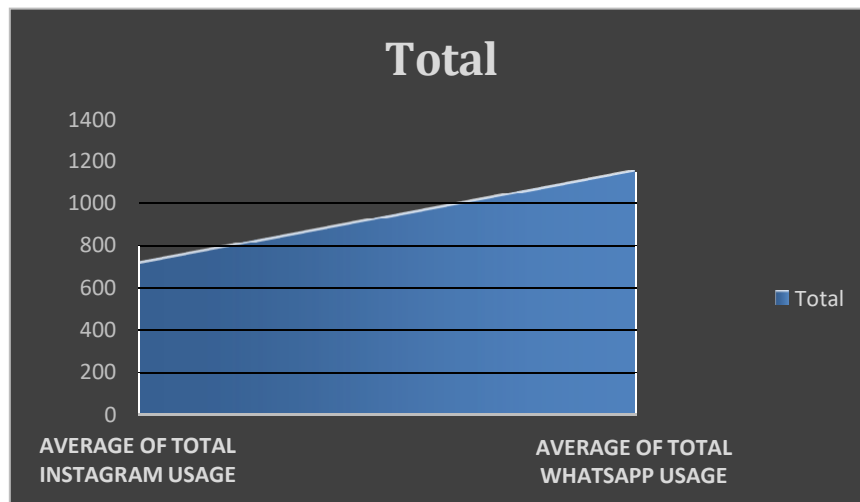


As we can see, females have more posts on Instagram compared to males. Hence, we can say that there might be a high possibility that females have more followers on Instagram and are more active on social media platforms than males.

3.12 Time spent on WhatsApp compared to Instagram

Values

Average of Total Instagram Usage	720.1842752
Average of Total WhatsApp Usage	1149.784152

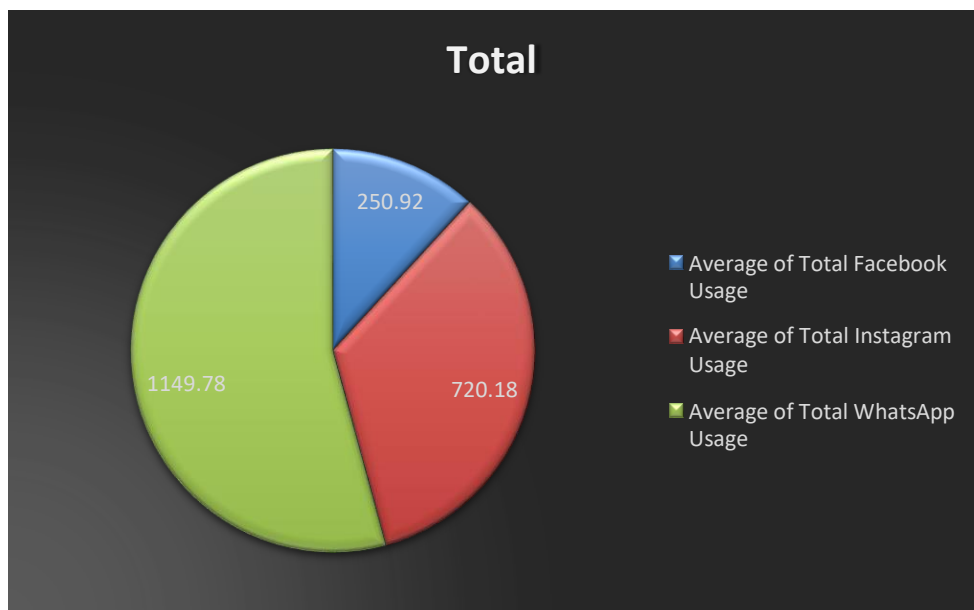


From the area of the graph, we can easily make out that average Instagram usage is lesser than WhatsApp usage. The average WhatsApp usage is 1149.78 whereas Instagram usage lies somewhere around 720.18 minutes. Since WhatsApp was launched in January 2009 and Instagram in late October 2010, This might be the reason why WhatsApp is more popular and is used more often.

3.13 Time spent on different social media platforms

Values

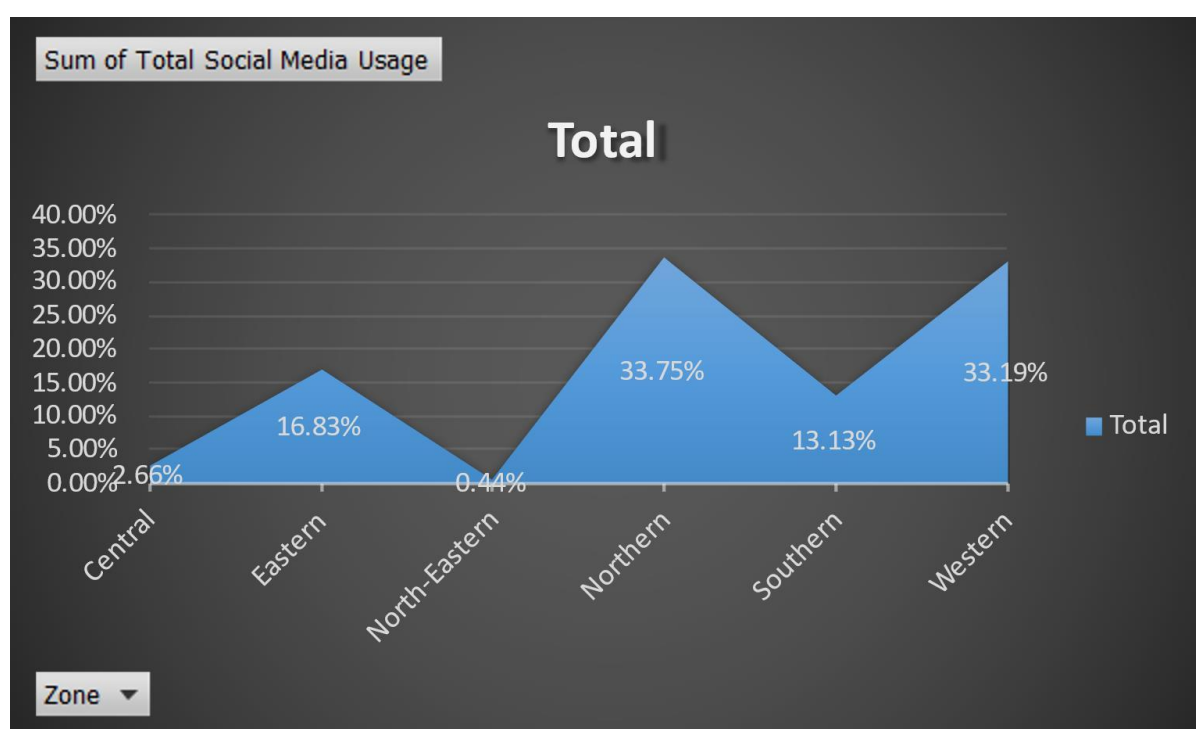
Average of Total Facebook Usage	250.92
Average of Total Instagram Usage	720.18
Average of Total WhatsApp Usage	1149.78



Among the 3 social media platforms, users spend most of their time using WhatsApp followed by Instagram. 1149.78 minutes are spent on an average by a user in a week.

3.14 Social Media usage based on different areas of India

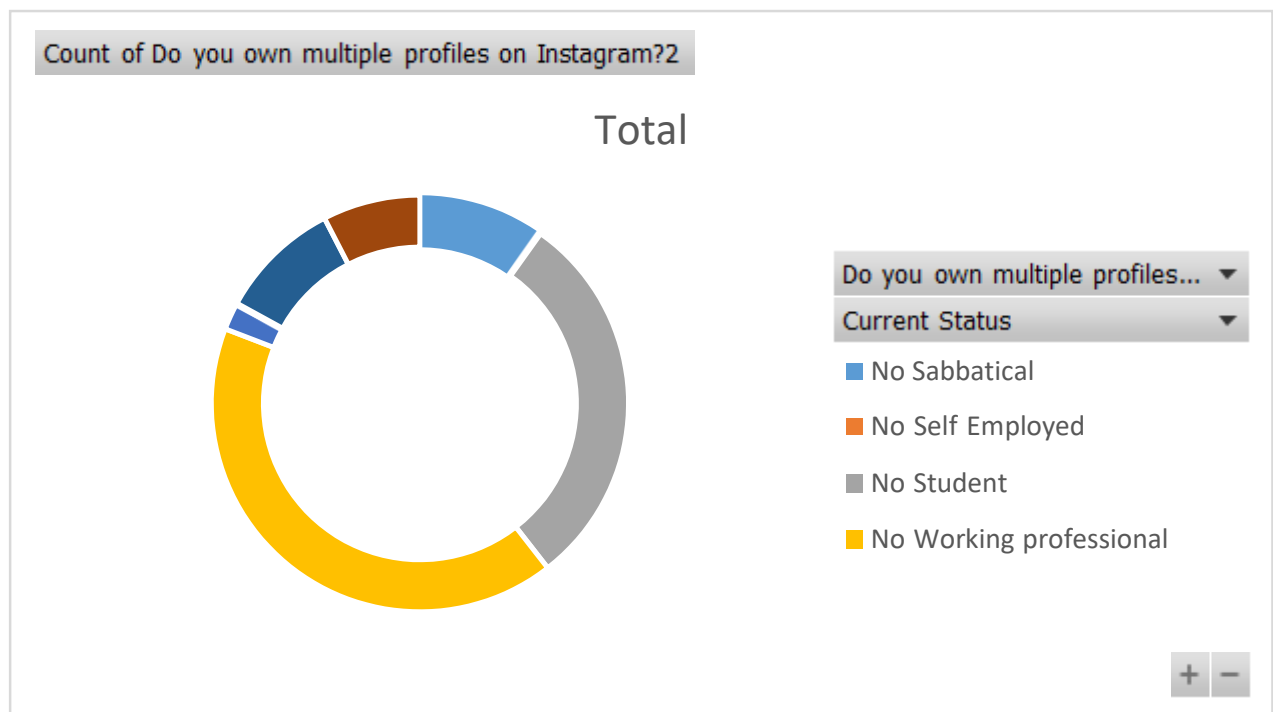
Row Labels	Sum of Total Social Media Usage
Central	2.66%
Eastern	16.83%
North-Eastern	0.44%
Northern	33.75%
Southern	13.13%
Western	33.19%
Grand Total	100.00%



From this chart we can conclude that people from northern zone of the country spend the most time on social media (33.75%) followed by western (33.19%), eastern (16.83%), southern (13.13%), central (3.66%) and north eastern (0.44%). The possible reason for north eastern people to spend the least time on social media can be that they are in a bit remote location as compared to the rest of the zones. They are not well connected to the internet due to rough terrains of Himalayas and thus the culture of social media its not evolved much. Whereas other zones are well connected to the internet and culture of social media is very much evolved, leading to spending more time on social media.

3.15 No. of Instagram accounts of people from different employment status

Row Labels	Count of Do you own multiple profiles on Instagram?2
No	1316
Sabbatical	157
Self Employed	3
Student	483
Working professional	673
Yes	312
Sabbatical	33
Self Employed	2
Student	154
Working professional	123
Grand Total	1628



As we can see, students tend to own multiple Instagram profiles compared to other people, whereas, most of the working professionals tend to have only one profile. This might be because working professionals have lesser free time to manage multiple profiles.

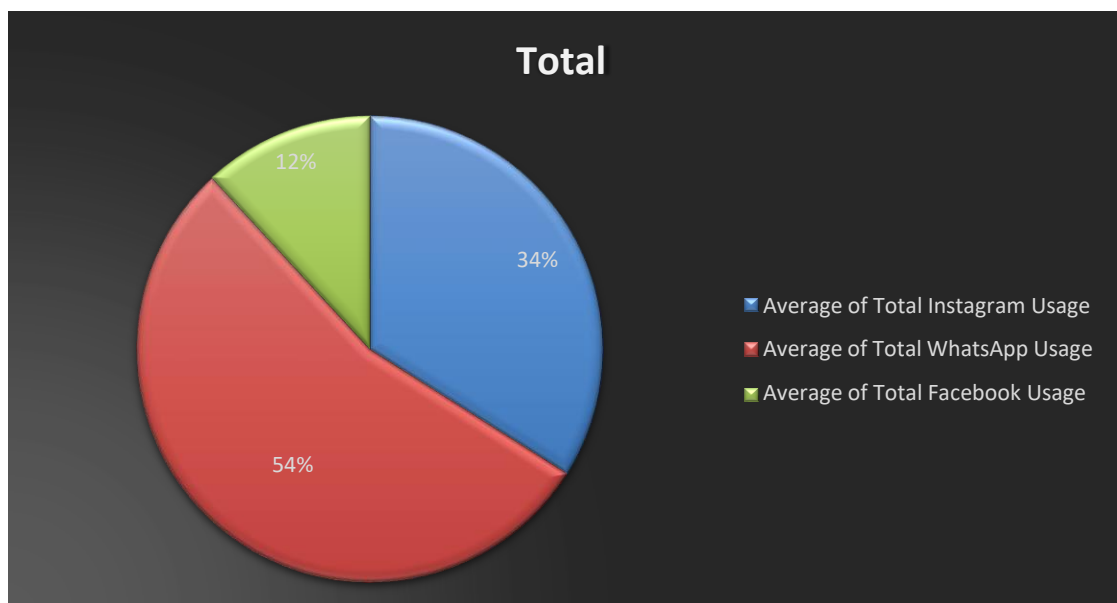
Chapter-4

Data Visualization

4.1 Data Visualization

4.1 Average time spent by a person on Social Media Platforms

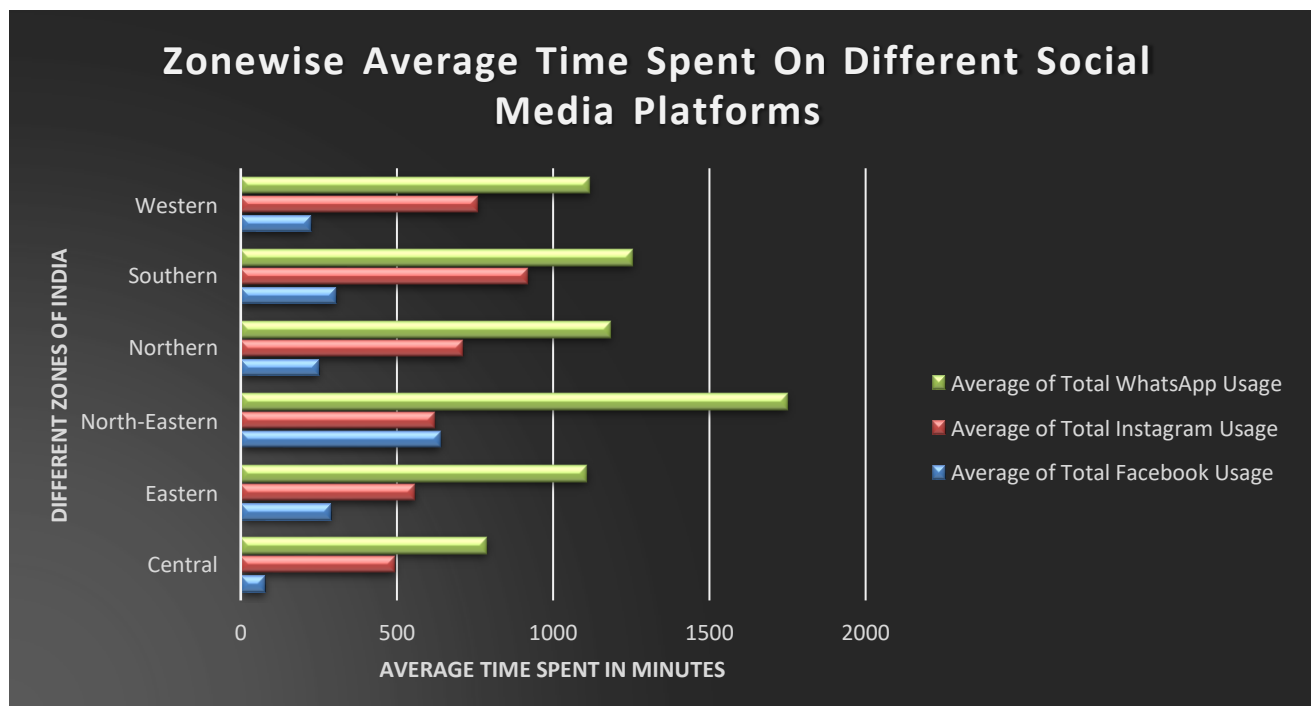
Values	
Average of Total Instagram Usage	720.1842752
Average of Total WhatsApp Usage	1149.784152
Average of Total Facebook Usage	250.9164619



This pie chart shows the average time spent by an individual on Instagram, WhatsApp, and Facebook. 54% of the total time spent on social media is spent on WhatsApp. Next is Instagram with 34% followed by Facebook with 12%. This might be because WhatsApp is more like a messaging app that we use very frequently as compared to the other two sites.

4.2 Average time spent on Social Media platforms in six different zones of India

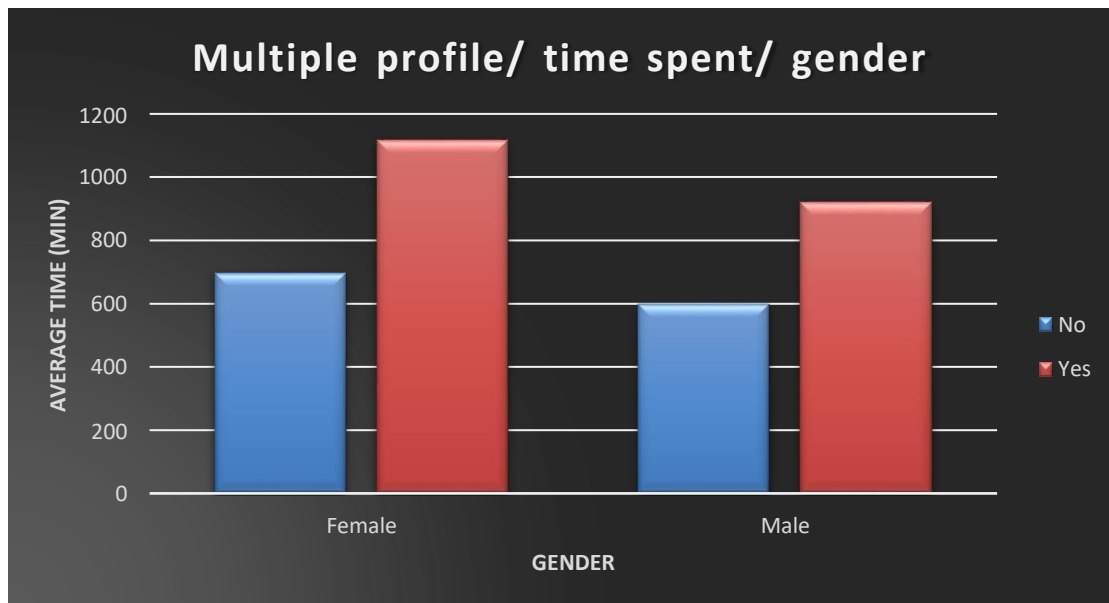
Row Labels	Average of Total Facebook Usage	Average of Total Instagram Usage	Average of Total WhatsApp Usage
Central	76.82352941	494.2745098	788.7058824
Eastern	289.3800738	557.4169742	1107.763838
North-Eastern	638.5	622.3	1749.1
Northern	248.0830258	710.4686347	1185.023985
Southern	305.1469194	917.0900474	1255.222749
Western	222.6887661	757.6224678	1117.485451
Grand Total	250.9164619	720.1842752	1149.784152



This chart shows the average time spent on WhatsApp, Instagram, and Facebook in six different zones of India. By looking at the chart we can easily conclude that irrespective of the zones, people spend the most time on WhatsApp followed by Instagram and then Facebook. We can also conclude that among different zones, North Eastern people spent the most time on both WhatsApp and Facebook, and Southern people spent the most time on Instagram as compared to the rest of the zones

4.3 No. of profiles on Instagram of males and females

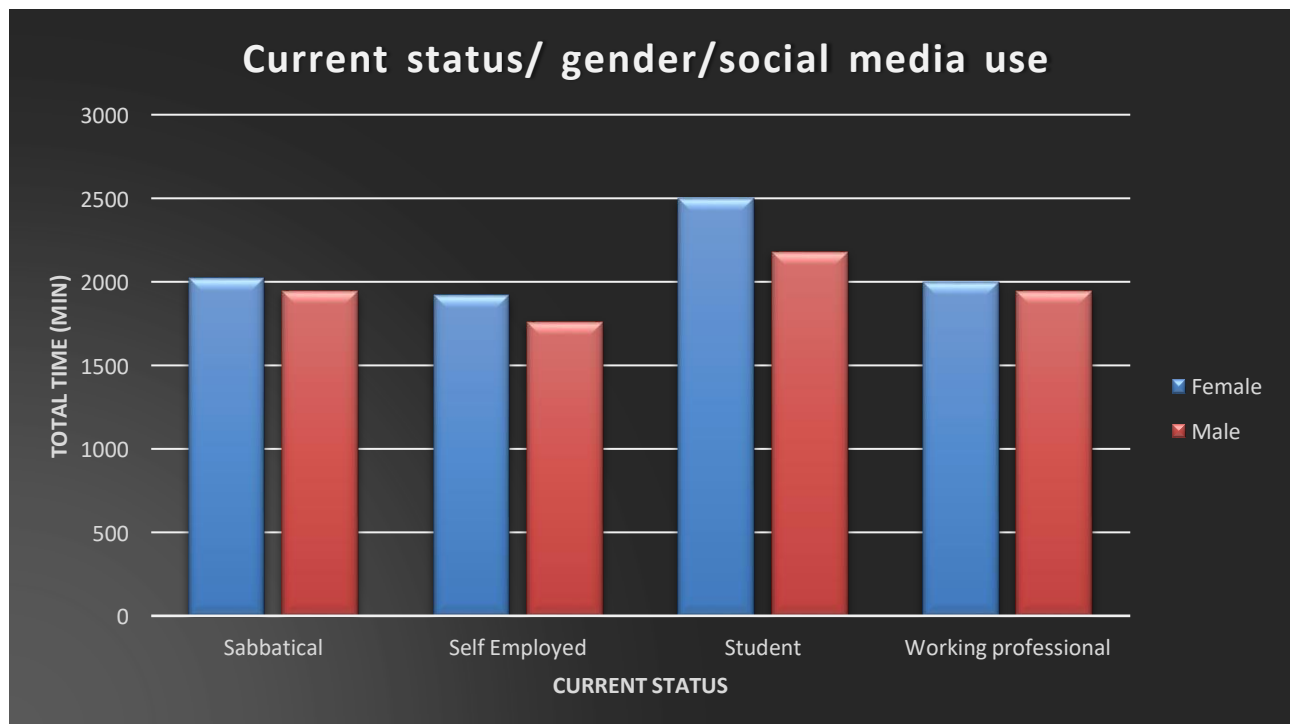
Average of Total Instagram Usage			
Row Labels	Column Labels		Grand Total
	No	Yes	
Female	696.5015773	1117.346369	789.1599016
Male	596.979442	920.4545455	649.499385
Grand Total	644.9619772	1033.778135	719.3296433



From this chart, we can conclude that both males and females more have more than one profile on Instagram spend more time on these platforms compared to those with a single profile. Another conclusion that we can draw is whether females have one or more profiles, they spend more time on Instagram as compared to males.

4.4 Social Media usage by profession

Average of Total Social Media Usage			
Row Labels	Column Labels		
	Female	Male	Grand Total
Sabbatical	2019.22807	1938.626316	1986.987368
Self Employed	1916	1756.333333	1820.2
Student	2496.928161	2177.302083	2352.191824
Working professional	1999.186246	1943.547085	1967.972327
Grand Total	2214.847478	2025.20246	2120.024969



From this chart, we conclude that students spend more time on social media as compared to most other professions. The rest three status do not have a very significant difference in the time they spend on social media. Another conclusion we can draw is that irrespective of the status, females spend more time on social media than males.

Chapter-5

Findings

5. Findings

According to the data analysis done by using different tools, we find the following results:

5.1 The people with an age group of 23 to 32 years have more number of followers on Instagram, when compared to other age groups.

5.2 Facebook is mostly used by the people of age group 43-52.

5.3 The people with an age group of 13-22 are more likely to use Instagram as a preferred social media platform as compared to other age groups.

5.4 Nowadays, people prefer to use Instagram rather than any other social media application.

5.5 Males tend to use social media slightly more than females.(Not a huge difference is there)

5.6 Working professionals use social media the most, followed by students.

5.7 People who are self employed, tend to use social media more on weekends rather than weekdays.

5.8 Females generally have more number of followers on Instagram when compared to males.

5.9 Leaving some people from the age group 23 to 32 and 13 to 22, almost everyone has a single account on Instagram.

5.10 People of the age group 23-32 have the average maximum number of posts on Instagram.

5.11 Females have more posts on Insstagram when compared with males.

5.12 Between Instagram and Whatsapp, people tend to use whatsapp more.

5.13 Whatsapp is the most used social media platform followed by Instagram, and then Facebook.

5.14 From this chart we can conclude that people from northern zone of the country spend the most time on social media followed by western, eastern, southern, central

and north eastern

5.15 Students tend to own multiple Instagram profiles compared to other people.

Chapter-6

Conclusion

6. Conclusion

Social Media has a growing presence in our daily life. From professional work to casual texting, social media has proven that it can handle anything. But what makes this modern tool so great is the people that use it. And with our data study, we have found some interesting trends about the people that navigate through these platforms on a daily basis.

One trend was that people between ages of 23 to 32 use Instagram more, and people between the ages of 43 to 52 use Facebook more. Instagram comes out on top as the most preferred social media platform to use among people, although, WhatsApp is used more, followed closely by Instagram. Also, from our study, we have found out that males tend to use social media platforms more, compared to females, but the difference is not too big. Another interesting trend that we observed is that working professionals tend to use social media platforms more compared to other people. A reason to this specific trend might be because platforms like WhatsApp make communication easy and efficient. Another Instagram trend that we found is that females have more followers on Instagram on an average and more posts compared to males and most people have a single account on Instagram.

We hope that the results from our Data study has shed some light into the usage of social media and you, as a reader, have been well informed about these findings. Thank you for spending your time and going through our report.

Thank You!