Social Media Usage and Emotional Well-Being

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Introduction:

In today's world, many of us rely on social media platforms to find and connect with each other. While social media has many positive effects, it can also cause problems for some people. Spending too much time interacting with social media can make you feel lonely and isolated, and can exacerbate health and mental health problems such as anxiety and depression. Feelings of sadness, dissatisfaction, frustration, and loneliness can also affect your life.

The dataset provides a way to study this phenomenon in more detail using social media and emotional well-being. By analyzing the data, we can gain insights into which age groups are most active on social media, and whether increased engagement is associated with negative emotions such as anxiety or boredom.

Business Impact

Analyzing social media use and emotional well-being has great benefits for individuals in solving some behaviors of how to deal with these platforms. Here are ways to help us:

First, improving individual well-being: By identifying patterns of social media use that are associated with positive or negative emotions, users can make informed choices about their online habits.

Second, supporting awareness campaigns: by using influencers to educate people on how to use social media in a healthy way, and also establishing companies with local organizations concerned with mental health or community positivity.

Thirdly, supporting technological tools to improve emotional state: By integrating artificial intelligence techniques into sentiment analysis to

understand the user's feelings through his posts and comments, as well as using interactive robots (chatbots) and providing these robots with a nice and encouraging conversation based on the user's state and providing technical advice for dealing with stress.
Ultimately, analysis can contribute to a culture of healthy, balanced, and purposeful social media use. This helps individuals and communities thrive emotionally while benefiting from the digital world.

Data

File Name: train,csv.

Description: The relationship between social media use and users emotional well-being .

Dataset Details: 1001 Rows and10 Columns.

Size: 48.75KB.

Source: Kaggle

Data Profiling:

- Get the total number of rows and columns (1001 rows & 10 columns).
- Examine information about the null values and data type of each column using .info() function.
- using describe () function.
- Check the total number of null values in each column and the sum of null values in each.
- Investigate the number of unique values in each column using the unique () function.
- Get statistics of Mode(), Max(), for Age and Gender.
- Get def with detec_swap function to detect columns with swapped values.

Observations:

Through the isnull detection tool, there are not many nulls, but through the unique function for the age and gender column, I discovered that there is a switch between the columns.

Refer to this notebook to check the Python Code: https://colab.research.google.com/drive/1gw6EGJjB0yWwfcTODV09nr6lc3L42hvS?usp=sharing

Data Wrangling:

- There are not many null.
- There is a switch between the columns Age and Gender.

• **Column Name**	• **Number of Null Values**	• **Action Made**	**Reason**
User_ID	0	nothing	
Age	0 , But there is an exchange of information with the gender column.	We corrected the columns. Check the value.	Because there is an error in entering the data,
Gender	0 , But there is an exchange of information with the age column.	We corrected the columns. Check the value.	Because there is an error in entering the data,
Platform	1	Fill it with “Unknown	Low number of categorical null values.
Daily_Usage_Time (minutes)	1	Fill it with mean	Low number of numerical null values
Posts_Per_Day	1	Fill it with 0	Low number of categorical null values

Likes_Received_Per_Day	1	Fill it with median	Low number of numerical null values
Comments_Received_Per_Day	1	Fill it with media	Low number of numerical null values
Messages_Sent_Per_Day	1	Fill it with media	Low number of numerical null values
Dominant_Emotion	1	Fill it with “Unknown	Low number of categorical null values.

I did not delete any of the columns because they are important and their number is small. I corrected the columns and replace some of them with mathematical operations.

1001 Rows and10 Columns.

Refer to this notebook to check the Python Code:
https://colab.research.google.com/drive/1a39KBYFpH5X1xL_EZxAn5SNYNR78FKMu?usp=sharing

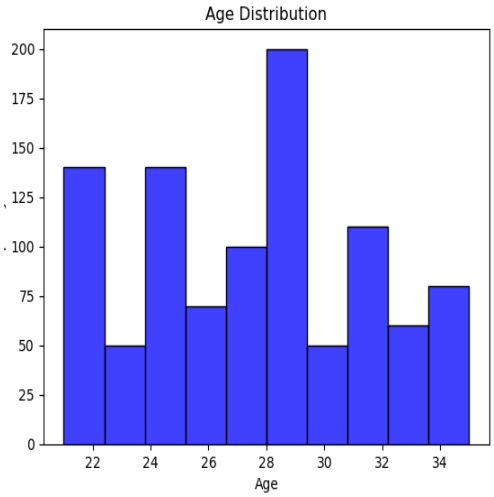
Data Analysis:

1- Age Distribution:

1- Age Distribution:

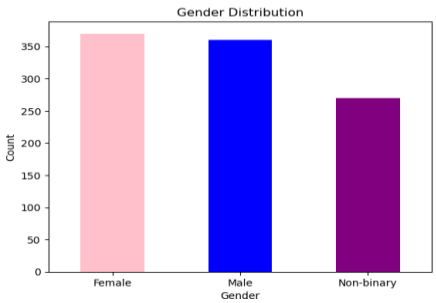
Through the graph, it was shown that the age group that uses social media the most is between 28 and 29 years old. A histogram was used that was

created using sns.histplot(). There is a difference in the age distribution, but it is not equal.



2- Gender Distribution:

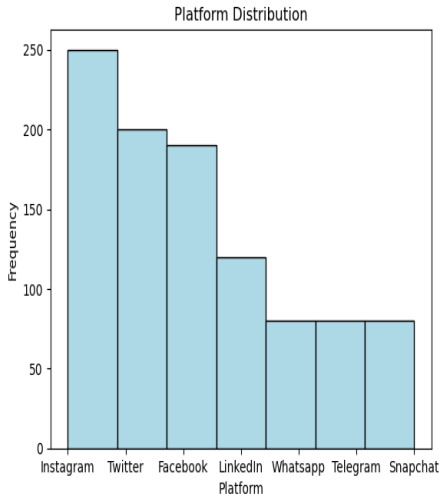
The graph shows that the distribution is relatively balanced between males and females with a slight advantage for females. The graph used is a bar chart using pandas. plot() to calculate the values and draw the bar chart directly. Matplotlib was used to customize the graph, such as titles and axes formatting.



3- Platform Distribution:

The graph shows the distribution of social media platforms usage. Instagram is the most used platform with 250 users, the highest among all platforms. Twitter is in second place with 200 users, which means it is

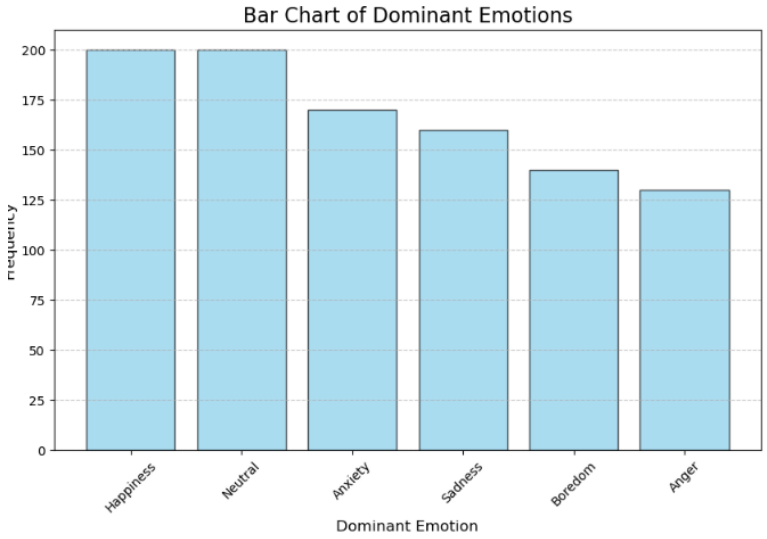
also a preferred platform but less than Instagram. Facebook is in third place with 190 users, followed by LinkedIn with 120 users, which means it is less popular compared to general social platforms but is still used. Telegram, WhatsApp، Snapchat has the least number of users Matplotlib was used.



4- Dominant Emotion Distribution:

From the graph it appears that happiness and neutral emotions are the most common in the data as they have the highest frequencies. The least common emotions are anger and boredom as they have the least frequencies compared to the rest of the categories. The graph reflects the distribution of emotions in the data, where happiness and neutral emotions appear as the most common emotions while anger and

boredom are the least. Pandas and Matplotlib libraries were used



Conclusion:

By analyzing the data, especially in its EDA stages, it became clear that social media does not negatively affect emotions, and the data analysis process proved the opposite, that social platforms have a good effect on emotions. This was evident from the graph, the dominant emotions were happiness and neutral feelings were more than others, and also that men and women use the platforms equally, but with a slight increase among women, and that the most age group that uses social media is between 28 and 29, and the platform that people use the most is Instagram, because people prefer attractive visual content and ease of use, and also the platform focuses on stories and because Instagram includes diverse age groups, which makes it a strong and ideal active environment for business owners.