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#12. Case Study: Social Media Engagement (Skewness and Kurtosis)
# • Objective: Analyze the distribution of user engagement metrics (likes, shares) on social
# media.
# • Dataset: Social media posts dataset.
 • Python Focus: pandas, matplotlib, seaborn.
# • Key Concepts:
# o Calculate skewness and kurtosis of likes and shares.
# o Visualize the distribution using histograms.
# importing libraries
import pandas as pd
import matplotlib.pyplot as plt
url='/content/sentimentdataset.csv'
#extracting data
df=pd.read_csv(url)
#displaying few lines of data set
print(df.head())
       Unnamed: 0.1 Unnamed: 0 \
₹
                  0
                               0
     1
                   1
                               1
     2
                   2
                               2
     3
                   3
                               3
     4
                   4
                               4
                                                     Text
                                                             Sentiment \
     0
        Enjoying a beautiful day at the park!
                                                            Positive
                                                     . . .
         Traffic was terrible this morning.
                                                            Negative
                                                      . . .
        Just finished an amazing workout! 🍐
                                                             Positive
                                                      . . .
         Excited about the upcoming weekend getaway! ...
                                                           Positive
        Trying out a new recipe for dinner tonight. ...
                  Timestamp
                                      User
                                                Platform \
     0 2023-01-15 12:30:00
                             User123
                                               Twitter
       2023-01-15 08:45:00
                             CommuterX
                                               Twitter
       2023-01-15 15:45:00
                             FitnessFan
                                              Instagram
     3 2023-01-15 18:20:00
                             AdventureX
                                               Facebook
     4 2023-01-15 19:55:00
                                              Instagram
                                          Hashtags Retweets Likes
                                                                          Country \
     0
        #Nature #Park
                                                               30.0
                                                                        USA
                                                        15.0
        #Traffic #Morning
                                                         5.0
                                                               10.0
                                                                        Canada
        #Fitness #Workout
                                                               40.0
                                                                      USA
                                                        20.0
        #Travel #Adventure
                                                        8.0
                                                               15.0
                                                                       UK
        #Cooking #Food
                                                        12.0
                                                               25.0
                                                                       Australia
        Year
             Month Day Hour
     0
       2023
                 1
                     15
                           12
        2023
        2023
                  1
                     15
                            15
     3
        2023
                     15
                            18
                  1
        2023
                     15
                            19
                  1
      В
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                                                          ⊕ .....
ASSIGNMENT KHUSHI BORA [2426MCA2242]
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#calculating skewness likes and shares
skewness=df['Likes'].skew()
print(f'skewness of likes:{skewness}')
skewness1=df['Retweets'].skew()
print(f'skewness of shares:{skewness1}')
   skewness of likes:0.37813850875791316
     skewness of shares:0.36341226758224254
#calculating kurtosis of likes and shares
kurtosis=df['Likes'].kurt()
print(f'kurtosis:{kurtosis}')
kurtosis1=df['Retweets'].kurt()
print(f'kurtosis:{kurtosis1}')
```

kurtosis:0.0008659267198405374 kurtosis:-0.016312891232299176

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#visualtion of likes and shares
df['Likes'].plot(kind='hist',bins=20,title='likes')
plt.xlabel('Likes')
plt.show()
df['Retweets'].plot(kind='hist',bins=20,title='Shares')
plt.xlabel('Shares')
plt.show()
```





