# HonorsReportCode

December 7, 2022

## 1 Business Analytics Honors Program Digital Marketing Report Python Data Analysis

### 1.0.1 Vignitha Ampally

[219]:
```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

[220]:
```
# Read in all of the discussion forum data

#Discussion Forum #1
df_1 = pd.read_csv("discussion - discussion.csv")

#Discussion Forum #2
df_2 = pd.read_csv("discussion (1) - discussion (1).csv")

#Discussion Forum #3
df_3 = pd.read_csv("discussion (2) - discussion (2).csv")
```

[221]:
```
# Reading in df_1 to view the display
df_1
```

[221]:

| | id | discussion | parent | userid | userfullname | created | \ |
|---|---|---|---|---|---|---|---|
| 0 | 28103 | 16796 | 0 | 103354 | Maryam El-Baytam | 1661363003 | |
| 1 | 83623 | 16796 | 28103 | 32348 | Chelsea Erickson | 1662069371 | |
| 2 | 92364 | 16796 | 28103 | 135641 | Sara Roe | 1662231289 | |
| 3 | 158897 | 16796 | 92364 | 103354 | Maryam El-Baytam | 1663299858 | |
| 4 | 28728 | 17095 | 0 | 135641 | Sara Roe | 1661365679 | |
| .. | … | … | … | … | … | … | |
| 94 | 158845 | 72520 | 158528 | 103540 | Miracle Chin | 1663299136 | |
| 95 | 158650 | 72562 | 0 | 11733 | Andrew Matherly | 1663296948 | |
| 96 | 158767 | 72595 | 0 | 103540 | Miracle Chin | 1663298313 | |
| 97 | 158841 | 72625 | 0 | 126591 | Quang Tran | 1663299083 | |
| 98 | 158942 | 72625 | 158841 | 148199 | Spencer Oxendine | 1663300373 | |

```
      modified  mailed                                              subject  \
0   1661363003       1          Integration into the "New" Digital World
1   1662069371       1      Re: Integration into the "New" Digital World
2   1662231289       1      Re: Integration into the "New" Digital World
3   1663299858       1      Re: Integration into the "New" Digital World
4   1661365679       1  Google Analytics 5 - Digital Marketing Analyti…
..         …     …                                                    …
94  1663299136       1            Re: TikTok's SEO opportunity for brands
95  1663296948       1   Keep Optimising Podcast (Omnisend, Gabe Macaluso
96  1663298313       1    The importance of Pinterest in mobile marketing
97  1663299083       1   Biggest Changes to the Future of Email Marketing
98  1663300373       1  Re: Biggest Changes to the Future of Email Mar…

                                              message  …  messageformat  \
0   <p dir="ltr" style="text-align:left;">In 2021,…  …              1
1   <div class="text_to_html">Hey Maryam this was …  …              1
2   <div class="text_to_html">Hi Maryam,<br />\n<b…  …              1
3   <div class="text_to_html">Hi Sara! <br />\n<br…  …              1
4   <p dir="ltr">During my marketing internship, I…  …              1
..                                                 …  …            …
94  <div class="text_to_html">Hey Janae! I really …  …              1
95  <p dir="ltr" style="text-align:left;">This pod…  …              1
96  <p dir="ltr" style="text-align:left;"><a href=…  …              1
97  <p dir="ltr" style="text-align:left;">As discu…  …              1
98  <div class="text_to_html">Quang, I love your i…  …              1

    messagetrust  attachment  totalscore  mailnow  deleted  privatereplyto  \
0              0           0           0        0        0               0
1              0           0           0        0        0               0
2              0           0           0        0        0               0
3              0           0           0        0        0               0
4              0           0           0        0        0               0
..           …         …         …      …      …             …
94             0           0           0        0        0               0
95             0           0           0        0        0               0
96             0           0           0        0        0               0
97             0           0           0        0        0               0
98             0           0           0        0        0               0

    privatereplytofullname  wordcount  charcount
0                      NaN        441       2351
1                      NaN         76        332
2                      NaN        126        664
3                      NaN        153        804
4                      NaN        211       1201
..                       …        …        …
```

```
94                    NaN        133        617
95                    NaN        374       1873
96                    NaN        245       1245
97                    NaN        296       1632
98                    NaN        107        490

[99 rows x 21 columns]
```

[222]:
```
# Cleaning the dataframes
df_1 = df_1.
 ↪drop(columns=['mailed','messageformat','messagetrust','attachment','totalscore','mailnow','
 ↪ 10'])
df_2 = df_2.
 ↪drop(columns=['mailed','messageformat','messagetrust','attachment','totalscore','mailnow','
df_3 = df_3.
 ↪drop(columns=['mailed','messageformat','messagetrust','attachment','totalscore','mailnow','
```

[223]:
```
# Viewing the cleaned data
df_1
```

[223]:
```
        id  discussion  parent  userid      userfullname     created  \
0    28103       16796       0  103354  Maryam El-Baytam  1661363003
1    83623       16796   28103   32348  Chelsea Erickson  1662069371
2    92364       16796   28103  135641         Sara Roe  1662231289
3   158897       16796   92364  103354  Maryam El-Baytam  1663299858
4    28728       17095       0  135641         Sara Roe  1661365679
..     …           …      …      …               …          …
94  158845       72520  158528  103540      Miracle Chin  1663299136
95  158650       72562       0   11733   Andrew Matherly  1663296948
96  158767       72595       0  103540      Miracle Chin  1663298313
97  158841       72625       0  126591        Quang Tran  1663299083
98  158942       72625  158841  148199  Spencer Oxendine  1663300373

      modified                                              subject  \
0   1661363003              Integration into the "New" Digital World
1   1662069371           Re: Integration into the "New" Digital World
2   1662231289           Re: Integration into the "New" Digital World
3   1663299858           Re: Integration into the "New" Digital World
4   1661365679  Google Analytics 5 - Digital Marketing Analyti…
..         …                                                   …
94  1663299136                Re: TikTok's SEO opportunity for brands
95  1663296948   Keep Optimising Podcast (Omnisend, Gabe Macaluso
96  1663298313    The importance of Pinterest in mobile marketing
97  1663299083   Biggest Changes to the Future of Email Marketing
98  1663300373  Re: Biggest Changes to the Future of Email Mar…

                                              message  wordcount  charcount
```

```
0   <p dir="ltr" style="text-align:left;">In 2021,…        441       2351
1   <div class="text_to_html">Hey Maryam this was …        76        332
2   <div class="text_to_html">Hi Maryam,<br />\n<b…        126        664
3   <div class="text_to_html">Hi Sara! <br />\n<br…        153        804
4   <p dir="ltr">During my marketing internship, I…        211       1201
..                                                  …       …         …
94  <div class="text_to_html">Hey Janae! I really …        133        617
95  <p dir="ltr" style="text-align:left;">This pod…        374       1873
96  <p dir="ltr" style="text-align:left;"><a href=…        245       1245
97  <p dir="ltr" style="text-align:left;">As discu…        296       1632
98  <div class="text_to_html">Quang, I love your i…        107        490

[99 rows x 11 columns]
```

[224]:
```
# Create a list to remove certain tags from the message column values
remove_words = ['<p dir="ltr" style="text-align:left;">',' </p>', '<div␣
 ↪class="text_to_html">', '</div>', '<br />', '<p dir="ltr">',
                '<','>','<p>','</p>','</span>','</span>','<span␣
 ↪style="font-size:15px;">', '</em>' , '\xa0/p' , '\xa0', '\n\n',
                '/p', '/span/span/pp/p', 'a href=', '"\\"','target="_blank"␣
 ↪rel="noreferrer noopener"Link/a',
               'style="font-size:15px;"/span/spanp', '/em','target="_blank"␣
 ↪rel="noreferrer noopener',
                'target="_blank','img src=','"\\"', 'style="font-size:','/span/
 ↪span/span/span/spanspan style="font-size:',
               'span','/span','style="font-size:','/p','style="background-color:
 ↪rgb',
                '/', 'alt=','rem','"\\n"']
```

[225]:
```
# Convert message column values to list to use for loop
list1 = df_1.message.values.tolist()
list2 = df_2.message.values.tolist()
list3 = df_3.message.values.tolist()
```

[226]:
```
# Utilize for loop to remove irrelevant words or characters
list_1 = []
list_2 = []
list_3 = []

for i in list1:
    for j in remove_words:
        i=i.replace(j,'')
    list_1.append(i)

for i in list2:
    for j in remove_words:
```

```
        i=i.replace(j,'')
    list_2.append(i)

for i in list3:
    for j in remove_words:
        i=i.replace(j,'')
    list_3.append(i)
```

[227]:
```
# Create a new column named content which contains the newly cleaned message␣
 ↪column values
df_1["content"] = list_1
df_2["content"] = list_2
df_3["content"] = list_3
```

[228]:
```
# Setting the location of the content column

column_to_move_1 = df_1.pop("content")
df_1.insert(9, "content", column_to_move_1 )
# df_1

column_to_move_2 = df_2.pop("content")
df_2.insert(9, "content", column_to_move_2 )
# df_2

column_to_move_3 = df_3.pop("content")
df_3.insert(9, "content", column_to_move_3 )
# df_3
```

[229]:
```
# Dropping the message column after adding the content column

df_1 = df_1.drop(columns=['message'])
df_2 = df_2.drop(columns=['message'])
df_3 = df_3.drop(columns=['message'])
```

[230]:
```
# Creating a new column named Post Status with the help of for loop to classify␣
 ↪each post
df_1['Post Status'] = ["Reply Post" if x[0:3] =='Re:' else "Original Post" for␣
 ↪x in df_1['subject']]
df_1
```

[230]:

| | id | discussion | parent | userid | userfullname | created | \ |
|---|---|---|---|---|---|---|---|
| 0 | 28103 | 16796 | 0 | 103354 | Maryam El-Baytam | 1661363003 | |
| 1 | 83623 | 16796 | 28103 | 32348 | Chelsea Erickson | 1662069371 | |
| 2 | 92364 | 16796 | 28103 | 135641 | Sara Roe | 1662231289 | |
| 3 | 158897 | 16796 | 92364 | 103354 | Maryam El-Baytam | 1663299858 | |
| 4 | 28728 | 17095 | 0 | 135641 | Sara Roe | 1661365679 | |
| .. | … | … | … | … | … | … | |

```
94  158845       72520  158528  103540      Miracle Chin  1663299136
95  158650       72562       0   11733   Andrew Matherly  1663296948
96  158767       72595       0  103540      Miracle Chin  1663298313
97  158841       72625       0  126591        Quang Tran  1663299083
98  158942       72625  158841  148199  Spencer Oxendine  1663300373

      modified                                          subject  \
0   1661363003          Integration into the "New" Digital World
1   1662069371      Re: Integration into the "New" Digital World
2   1662231289      Re: Integration into the "New" Digital World
3   1663299858      Re: Integration into the "New" Digital World
4   1661365679  Google Analytics 5 - Digital Marketing Analyti…
..         …                                                 …
94  1663299136            Re: TikTok’s SEO opportunity for brands
95  1663296948   Keep Optimising Podcast (Omnisend, Gabe Macaluso
96  1663298313    The importance of Pinterest in mobile marketing
97  1663299083   Biggest Changes to the Future of Email Marketing
98  1663300373  Re: Biggest Changes to the Future of Email Mar…

                                              content  wordcount  charcount  \
0   In 2021, Facebook rebranded to "Meta" and anno…        441       2351
1   Hey Maryam this was a great DN! Having a new p…         76        332
2   Hi Maryam,I enjoyed reading through your post!…        126        664
3   Hi Sara! I definitely agree! Though upon furth…        153        804
4   During my marketing internship, I have worked …        211       1201
..                                                …        …         …
94  Hey Janae! I really like this article about Ti…        133        617
95  This podcast is very fitting as our class had …        374       1873
96  "https:www.forbes.comsitesforbesbusinesscounci…        245       1245
97  As discussed in class, many believe that email…        296       1632
98  Quang, I love your insight into the subject of…        107        490

      Post Status
0   Original Post
1      Reply Post
2      Reply Post
3      Reply Post
4   Original Post
..             …
94     Reply Post
95  Original Post
96  Original Post
97  Original Post
98     Reply Post

[99 rows x 12 columns]
```

[231]:
```
# Creating a new column named Post Status with the help of for loop to classify each post
df_2['Post Status'] = ["Reply Post" if x[0:3] =='Re:' else "Original Post" for x in df_2['subject']]
df_2
```

[231]:

| | id | discussion | parent | userid | userfullname | created | modified | subject | content | wordcount | charcount | Post Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 163339 | 74452 | 0 | 5318 | Abigail Turik | 1663380764 | 1663380764 | Top 3 Epic Email Marketing Fails (Adidas, Amaz… | bbbThe article "Top 3 Epic Email Marketing Fai… | 425 | 2223 | Original Post |
| 1 | 206330 | 74452 | 163339 | 32348 | Chelsea Erickson | 1664217528 | 1664217528 | Re: Top 3 Epic Email Marketing Fails (Adidas, … | Abigail this was such an interesting article y… | 64 | 291 | Reply Post |
| 2 | 212820 | 74452 | 163339 | 135641 | Sara Roe | 1664324077 | 1664324077 | Re: Top 3 Epic Email Marketing Fails (Adidas, … | Hi Abigail,I really enjoyed reading through yo… | 141 | 714 | Reply Post |
| 3 | 217960 | 74452 | 163339 | 73441 | Jeremiah Graham | 1664410233 | 1664410233 | Re: Top 3 Epic Email Marketing Fails (Adidas, … | Hey Abigail, this was very insightful! I ember… | 128 | 484 | Reply Post |
| 4 | 219468 | 74452 | 163339 | 103354 | Maryam El-Baytam | 1664434069 | 1664434069 | Re: Top 3 Epic Email Marketing Fails (Adidas, … | Hi Abigail! This is a really interesting artic… | 161 | 849 | Reply Post |
| .. | … | … | … | … | … | … | … | … | … | … | … | … |
| 109 | 277386 | 123314 | 0 | 78045 | Janae Oremosu | 1665712699 | 1665712699 | Building a unique business brand on TikTok | pThis article by Aviva Sonenreich, a commercia… | 244 | 1458 | Original Post |
| 110 | 277560 | 123398 | 0 | 123301 | Pietro Alvise Coro | 1665714506 | 1665714578 | Grammarly and the Triple Story Telling Techniq… | When we all watched the video about Facebook V… | 196 | 993 | Original Post |
| 111 | 277633 | 123398 | 277560 | 78045 | Janae Oremosu | 1665715549 | 1665715668 | Re: Grammarly and the Triple Story Telling Tec… | Hello Pietro, \nSince most audiences have been… | 86 | 459 | Reply Post |
| 112 | 277606 | 123418 | 0 | 103060 | Matthew Caffrey | 1665715083 | 1665715276 | New way to promote YouTube presence | YouTube recently added the ability to use @han… | 121 | 703 | Original Post |
| 113 | 277887 | 123549 | 0 | 65868 | John Magda | 1665718998 | 1665718998 | Can Toys R' Us and Macy's Make a Come Back? | Recently Macy's and Toys R' Us joined forces, … | 267 | 1330 | Original Post |

```
1       Reply Post
2       Reply Post
3       Reply Post
4       Reply Post
..             …
109  Original Post
110  Original Post
111     Reply Post
112  Original Post
113  Original Post

[114 rows x 12 columns]
```

[232]:
```
# Creating a new column named Post Status with the help of for loop to classify␣
 ↪each post
df_3['Post Status'] = ["Reply Post" if x[0:3] =='Re:' else "Original Post" for␣
 ↪x in df_3['subject']]
df_3
```

[232]:
```
         id  discussion  parent  userid       userfullname     created  \
0    298882      132708       0  135641          Sara Roe  1666203707
1    303396      132708  298882   32348   Chelsea Erickson  1666286623
2    335651      132708  298882  103354   Maryam El-Baytam  1666929620
3    371485      132708  298882   73441    Jeremiah Graham  1667853090
4    394899      132708  298882   94902      Lindsay Holtz  1668368348
..      …          …      …      …                 …          …
142  435539      188544  435517  126591         Quang Tran  1669350818
143  435525      188545       0  126591         Quang Tran  1669349451
144  435528      188546       0   53202  Elizabeth Coleman  1669349818
145  435558      188546  435528  122742     Peyton Hopkins  1669351880
146  435551      188552       0  122742     Peyton Hopkins  1669351549

       modified                                              subject  \
0    1666203842  Paid Search  - Companies that tapped into thei…
1    1666286623  Re: Paid Search  - Companies that tapped into …
2    1666929620  Re: Paid Search  - Companies that tapped into …
3    1667853090  Re: Paid Search  - Companies that tapped into …
4    1668368348  Re: Paid Search  - Companies that tapped into …
..          …                                                 …
142  1669350818                   Re: Can Tech Giants Get Bigger?
143  1669349451                                The Crash of FTX
144  1669349818   Macy's Thanksgiving Day Parade in the Metaverse
145  1669351880  Re: Macy's Thanksgiving Day Parade in the Meta…
146  1669351605                                     Black Friday

                                              content  wordcount  charcount  \
0     0.9375;"This week, we're learning all about p…        181       1004
```

```
1    This is really interesting! I never though abo…         42        199
2    Hi Sara! I think this is a really great articl…       326       1525
3    Hey Sara I think this was a very cool article …       100        463
4    Hi Sara!\nThank you for sharing this article a…       155        771
..                                                   …       …         …
142  Hello John, I found this topic interesting as …       165        815
143  In the past few weeks, cryptocurrency advocate…       416       2249
144  pMacy's wants to incorporate their Thanksgivin…       239       1254
145  Hey Elizabeth,\nHearing about this was shockin…        80        361
146  Over the past couple of week, I have slowly be…       157        676

       Post Status
0    Original Post
1       Reply Post
2       Reply Post
3       Reply Post
4       Reply Post
..             …
142     Reply Post
143  Original Post
144  Original Post
145     Reply Post
146  Original Post

[147 rows x 12 columns]
```

[233]:
```
# Remove the 'Re' part from the subject to make the data more clean
df_1['Post Name'] = df_1["subject"].str.replace("Re:","")
df_2['Post Name'] = df_2["subject"].str.replace("Re:","")
df_3['Post Name'] = df_3["subject"].str.replace("Re:","")
# df_3
```

[234]:
```
post_name_column_to_move_1 = df_1.pop("Post Name")
df_1.insert(8, "Post Name", post_name_column_to_move_1 )
# df_1

post_name_column_to_move_2 = df_2.pop("Post Name")
df_2.insert(8, "Post Name", post_name_column_to_move_2 )
# df_2

post_name_column_to_move_3 = df_3.pop("Post Name")
df_3.insert(8, "Post Name", post_name_column_to_move_3 )
# df_3
```

[235]:
```
# Drop the subject column
df_1 = df_1.drop(columns=['subject'])
df_2 = df_2.drop(columns=['subject'])
```

```
df_3 = df_3.drop(columns=['subject'])
```

[236]:
```
df_1
```

[236]:

| | id | discussion | parent | userid | userfullname | created | modified | Post Name | content | wordcount | charcount | Post Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 28103 | 16796 | 0 | 103354 | Maryam El-Baytam | 1661363003 | 1661363003 | Integration into the "New" Digital World | In 2021, Facebook rebranded to "Meta" and anno… | 441 | 2351 | Original Post |
| 1 | 83623 | 16796 | 28103 | 32348 | Chelsea Erickson | 1662069371 | 1662069371 | Integration into the "New" Digital World | Hey Maryam this was a great DN! Having a new p… | 76 | 332 | Reply Post |
| 2 | 92364 | 16796 | 28103 | 135641 | Sara Roe | 1662231289 | 1662231289 | Integration into the "New" Digital World | Hi Maryam,I enjoyed reading through your post!… | 126 | 664 | Reply Post |
| 3 | 158897 | 16796 | 92364 | 103354 | Maryam El-Baytam | 1663299858 | 1663299858 | Integration into the "New" Digital World | Hi Sara! I definitely agree! Though upon furth… | 153 | 804 | |
| 4 | 28728 | 17095 | 0 | 135641 | Sara Roe | 1661365679 | 1661365679 | Google Analytics 5 - Digital Marketing Analyti… | During my marketing internship, I have worked … | 211 | 1201 | |
| .. | … | … | … | … | … | … | … | … | … | … | … | |
| 94 | 158845 | 72520 | 158528 | 103540 | Miracle Chin | 1663299136 | 1663299136 | TikTok’s SEO opportunity for brands | Hey Janae! I really like this article about Ti… | 133 | 617 | |
| 95 | 158650 | 72562 | 0 | 11733 | Andrew Matherly | 1663296948 | 1663296948 | Keep Optimising Podcast (Omnisend, Gabe Macaluso | This podcast is very fitting as our class had … | 374 | 1873 | |
| 96 | 158767 | 72595 | 0 | 103540 | Miracle Chin | 1663298313 | 1663298313 | The importance of Pinterest in mobile marketing | "https:www.forbes.comsitesforbesbusinesscounci… | 245 | 1245 | |
| 97 | 158841 | 72625 | 0 | 126591 | Quang Tran | 1663299083 | 1663299083 | Biggest Changes to the Future of Email Marketing | As discussed in class, many believe that email… | 296 | 1632 | |
| 98 | 158942 | 72625 | 158841 | 148199 | Spencer Oxendine | 1663300373 | 1663300373 | Biggest Changes to the Future of Email Marketing | Quang, I love your insight into the subject of… | 107 | 490 | |

```
3      Reply Post
4   Original Post
..            …
94     Reply Post
95  Original Post
96  Original Post
97  Original Post
98     Reply Post

[99 rows x 12 columns]
```

[237]:
```
# Rename the column to make them more readible and of quality
df_1 = df_1.rename(columns={'id':'ID', 'discussion':'Discussion No.', 'parent':
 ↪'ParentID', 'userid': 'UserID','userfullname':'Student Name',
                            'created':'Created','modified':'Modified','content':
 ↪'Content','wordcount':'Word Count','charcount':'Character Count'})
df_2 = df_2.rename(columns={'id':'ID', 'discussion':'Discussion No.', 'parent':
 ↪'ParentID', 'userid': 'UserID','userfullname':'Student Name',
                            'created':'Created','modified':'Modified','content':
 ↪'Content','wordcount':'Word Count','charcount':'Character Count'})
df_3 = df_3.rename(columns={'id':'ID', 'discussion':'Discussion No.', 'parent':
 ↪'ParentID', 'userid': 'UserID','userfullname':'Student Name',
                            'created':'Created','modified':'Modified','content':
 ↪'Content','wordcount':'Word Count','charcount':'Character Count'})
df_3
```

[237]:

| | ID | Discussion No. | ParentID | UserID | Student Name | Created | Modified | Post Name |
|---|---|---|---|---|---|---|---|---|
| 0 | 298882 | 132708 | 0 | 135641 | Sara Roe | 1666203707 | 1666203842 | Paid Search - Companies that tapped into thei… |
| 1 | 303396 | 132708 | 298882 | 32348 | Chelsea Erickson | 1666286623 | 1666286623 | Paid Search - Companies that tapped into the… |
| 2 | 335651 | 132708 | 298882 | 103354 | Maryam El-Baytam | 1666929620 | 1666929620 | Paid Search - Companies that tapped into the… |
| 3 | 371485 | 132708 | 298882 | 73441 | Jeremiah Graham | 1667853090 | 1667853090 | Paid Search - Companies that tapped into the… |
| 4 | 394899 | 132708 | 298882 | 94902 | Lindsay Holtz | 1668368348 | 1668368348 | Paid Search - Companies that tapped into the… |
| .. | … | … | … | … | … | … | … | … |
| 142 | 435539 | 188544 | 435517 | 126591 | Quang Tran | 1669350818 | | |
| 143 | 435525 | 188545 | 0 | 126591 | Quang Tran | 1669349451 | | |
| 144 | 435528 | 188546 | 0 | 53202 | Elizabeth Coleman | 1669349818 | | |
| 145 | 435558 | 188546 | 435528 | 122742 | Peyton Hopkins | 1669351880 | | |
| 146 | 435551 | 188552 | 0 | 122742 | Peyton Hopkins | 1669351549 | | |

```
142  1669350818                        Can Tech Giants Get Bigger?
143  1669349451                                     The Crash of FTX
144  1669349818    Macy's Thanksgiving Day Parade in the Metaverse
145  1669351880    Macy's Thanksgiving Day Parade in the Metaverse
146  1669351605                                        Black Friday

                                                  Content  Word Count  \
0     0.9375;"This week, we're learning all about p…         181
1    This is really interesting! I never though abo…          42
2    Hi Sara! I think this is a really great articl…         326
3    Hey Sara I think this was a very cool article …         100
4    Hi Sara!\nThank you for sharing this article a…         155
..                                                 …         …
142  Hello John, I found this topic interesting as …         165
143  In the past few weeks, cryptocurrency advocate…         416
144  pMacy's wants to incorporate their Thanksgivin…         239
145  Hey Elizabeth,\nHearing about this was shockin…          80
146  Over the past couple of week, I have slowly be…         157

     Character Count    Post Status
0               1004  Original Post
1                199     Reply Post
2               1525     Reply Post
3                463     Reply Post
4                771     Reply Post
..               …            …
142              815     Reply Post
143             2249  Original Post
144             1254  Original Post
145              361     Reply Post
146              676  Original Post

[147 rows x 12 columns]
```

[238]:
```
# Creating new dataframes based on the post status column condition. Basically,␣
 ↪seperating original and reply posts into different dataframes to perform␣
 ↪further visualizations.
df_1_original_posts = df_1.loc[df_1['Post Status'] == "Original Post"]
df_2_original_posts = df_2.loc[df_2['Post Status'] == "Original Post"]
df_3_original_posts = df_3.loc[df_3['Post Status'] == "Original Post"]

df_1_reply_posts = df_1.loc[df_1['Post Status'] == "Reply Post"]
df_2_reply_posts = df_2.loc[df_2['Post Status'] == "Reply Post"]
df_3_reply_posts = df_3.loc[df_3['Post Status'] == "Reply Post"]
df_3_reply_posts
```

[238]:

| | ID | Discussion No. | ParentID | UserID | Student Name | \ |
|---|---|---|---|---|---|---|
| 1 | 303396 | 132708 | 298882 | 32348 | Chelsea Erickson | |
| 2 | 335651 | 132708 | 298882 | 103354 | Maryam El-Baytam | |
| 3 | 371485 | 132708 | 298882 | 73441 | Jeremiah Graham | |
| 4 | 394899 | 132708 | 298882 | 94902 | Lindsay Holtz | |
| 5 | 418312 | 132708 | 298882 | 63619 | Isabella Cruz Batallas | |
| .. | … | … | … | … | … | |
| 129 | 435016 | 188231 | 434679 | 103540 | Miracle Chin | |
| 131 | 435022 | 188312 | 434897 | 103354 | Maryam El-Baytam | |
| 132 | 435523 | 188312 | 434897 | 78045 | Janae Oremosu | |
| 142 | 435539 | 188544 | 435517 | 126591 | Quang Tran | |
| 145 | 435558 | 188546 | 435528 | 122742 | Peyton Hopkins | |

| | Created | Modified | \ |
|---|---|---|---|
| 1 | 1666286623 | 1666286623 | |
| 2 | 1666929620 | 1666929620 | |
| 3 | 1667853090 | 1667853090 | |
| 4 | 1668368348 | 1668368348 | |
| 5 | 1668783862 | 1668783862 | |
| .. | … | … | |
| 129 | 1669262713 | 1669262713 | |
| 131 | 1669263087 | 1669263087 | |
| 132 | 1669349247 | 1669349247 | |
| 142 | 1669350818 | 1669350818 | |
| 145 | 1669351880 | 1669351880 | |

| | Post Name | \ |
|---|---|---|
| 1 | Paid Search - Companies that tapped into the… | |
| 2 | Paid Search - Companies that tapped into the… | |
| 3 | Paid Search - Companies that tapped into the… | |
| 4 | Paid Search - Companies that tapped into the… | |
| 5 | Paid Search - Companies that tapped into the… | |
| .. | … | |
| 129 | How to Increase Your SEO Using TikTok | |
| 131 | McDonald's and SMS Marketing | |
| 132 | McDonald's and SMS Marketing | |
| 142 | Can Tech Giants Get Bigger? | |
| 145 | Macy's Thanksgiving Day Parade in the Metaverse | |

| | Content | Word Count | \ |
|---|---|---|---|
| 1 | This is really interesting! I never though abo… | 42 | |
| 2 | Hi Sara! I think this is a really great articl… | 326 | |
| 3 | Hey Sara I think this was a very cool article … | 100 | |
| 4 | Hi Sara!\nThank you for sharing this article a… | 155 | |
| 5 | Hey Sara, I liked the article you found! I lov… | 105 | |
| .. | … | … | |
| 129 | Hey Cassidy,\nI really liked your article! I h… | 153 | |

```
131  Hi Kitch! I have accidentally signed up for so…         170
132  Hello Kitch, SMS is more active and more insta…          53
142  Hello John, I found this topic interesting as …         165
145  Hey Elizabeth,\nHearing about this was shockin…          80

     Character Count Post Status
1                199  Reply Post
2               1525  Reply Post
3                463  Reply Post
4                771  Reply Post
5                498  Reply Post
..               …          …
129              733  Reply Post
131              792  Reply Post
132              269  Reply Post
142              815  Reply Post
145              361  Reply Post

[112 rows x 12 columns]
```

[239]:
```
df_1_original_posts[['Post Name', 'Post Status']].shape

#41 students submitted for discussion 1
```

[239]: (41, 2)

[240]:
```
df_2_original_posts[['Post Name', 'Post Status']].shape

#41 students submitted for discussion 2
```

[240]: (41, 2)

[241]:
```
df_3_original_posts[['Post Name', 'Post Status']].shape

#35 students submitted for discussion 3
```

[241]: (35, 2)

[242]:
```
df_1_reply_posts[['Post Name', 'Post Status']].shape

#58 replies for discussion 1
```

[242]: (58, 2)

[243]:
```
df_2_reply_posts[['Post Name', 'Post Status']].shape

#73 replies for discussion 2
```

[243]: (73, 2)

[244]:
```
df_3_reply_posts[['Post Name', 'Post Status']].shape

#112 replies for discussion 3
```

[244]: (112, 2)

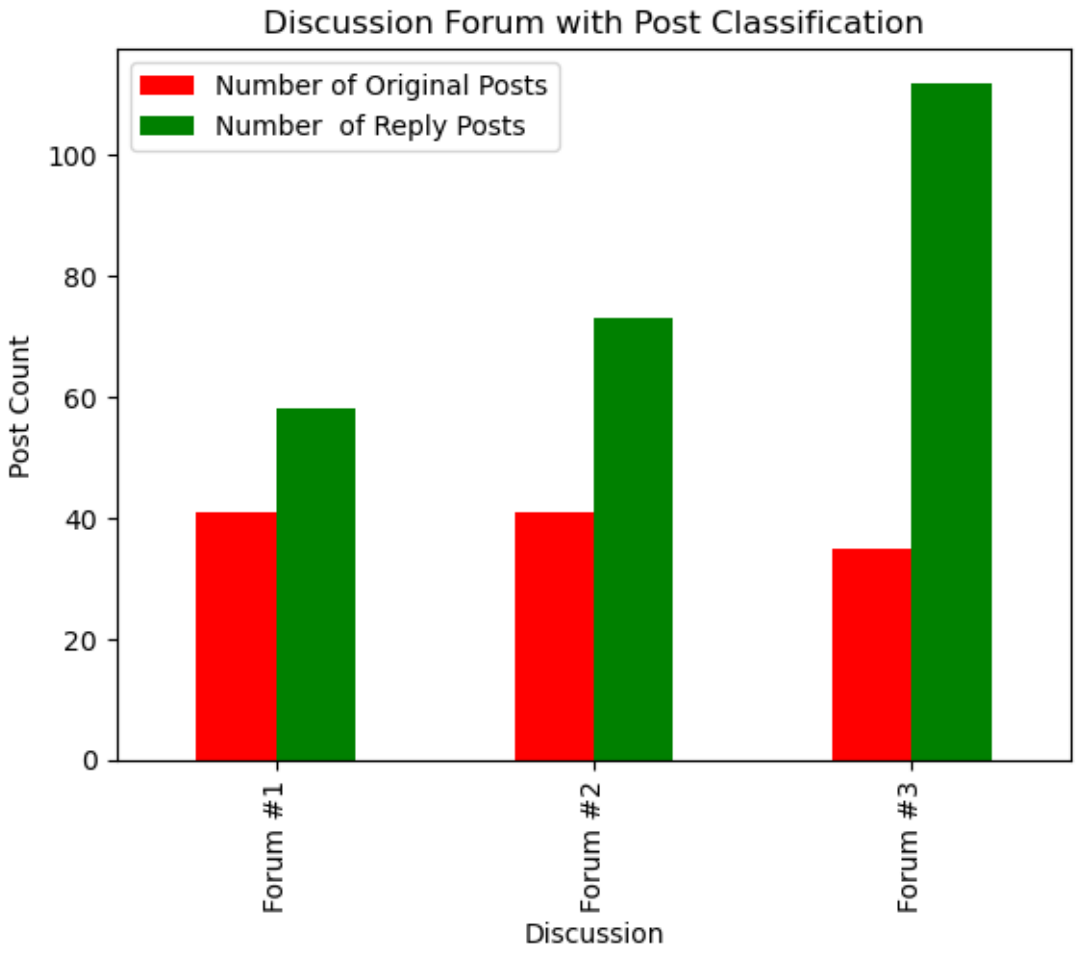
[245]:
```
# Reading in forums data
forum_data = pd.read_csv("Forum Data - Sheet1.csv")
forum_data.set_index("Discussion", inplace = True)
forum_data
```

[245]:

| Discussion | Number of Original Posts | Number of Reply Posts |
|---|---|---|
| Forum #1 | 41 | 58 |
| Forum #2 | 41 | 73 |
| Forum #3 | 35 | 112 |

[246]:
```
# Bar plot representing forum data
forum_data.plot.bar(color= {'red','green'})
plt.title('Discussion Forum with Post Classification')
plt.ylabel('Post Count')
```

[246]: Text(0, 0.5, 'Post Count')



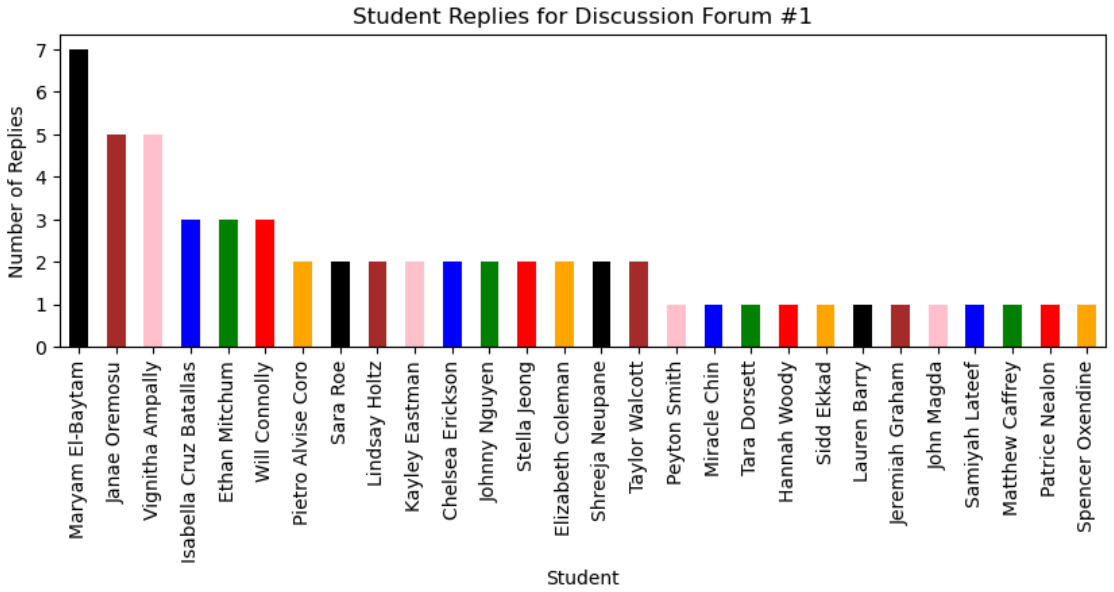

[247]:
```
# 28 Students added reply posts for Discussion 1

# df_1_reply_posts['Student Name'].value_counts().shape
df_1_reply_posts['Student Name'].value_counts()
```

[247]:
```
Maryam El-Baytam          7
Janae Oremosu             5
Vignitha Ampally          5
Isabella Cruz Batallas    3
Ethan Mitchum             3
Will Connolly             3
Pietro Alvise Coro        2
Sara Roe                  2
Lindsay Holtz             2
Kayley Eastman            2
Chelsea Erickson          2
Johnny Nguyen             2
```

```
Stella Jeong              2
Elizabeth Coleman         2
Shreeja Neupane           2
Taylor Walcott            2
Peyton Smith              1
Miracle Chin              1
Tara Dorsett              1
Hannah Woody              1
Sidd Ekkad                1
Lauren Barry              1
Jeremiah Graham           1
John Magda                1
Samiyah Lateef            1
Matthew Caffrey           1
Patrice Nealon            1
Spencer Oxendine          1
Name: Student Name, dtype: int64
```

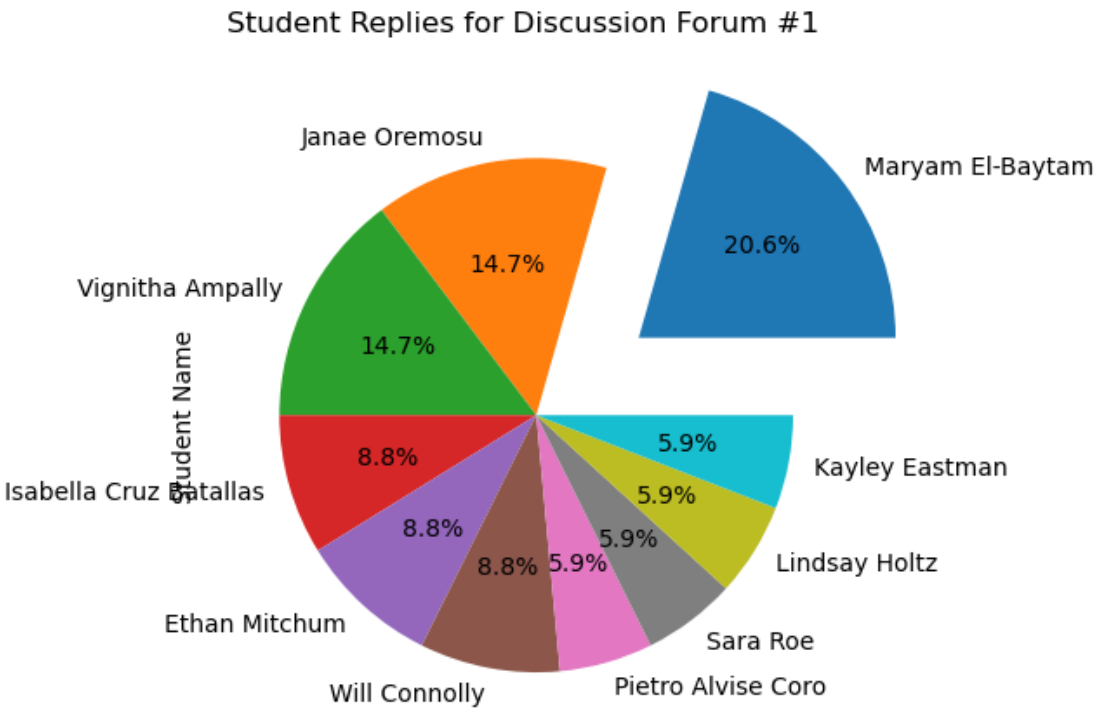
[248]:
```
# Bar plot representing the data above

df_1_reply_posts['Student Name'].value_counts().plot.bar(subplots = True, color␣
 ↪= {'red','pink','blue','green','black','orange','brown'}, figsize=(10,3))
plt.title("Student Replies for Discussion Forum #1")
plt.xlabel("Student")
plt.ylabel("Number of Replies")
```

[248]:
```
Text(0, 0.5, 'Number of Replies')
```



[249]:
```
# pie chart representing the data above (top 10)
df_1_replies_student_count = df_1_reply_posts['Student Name'].value_counts().
 ↪head(10)
df_1_replies_student_count
myexplode = [0.5, 0, 0, 0, 0, 0, 0, 0, 0, 0]
plot_1 = df_1_replies_student_count.plot.pie(subplots = True, title = "Student␣
 ↪Replies for Discussion Forum #1", autopct='%1.1f%%',explode = myexplode)
plot_1
```

[249]:
```
array([<AxesSubplot: ylabel='Student Name'>], dtype=object)
```



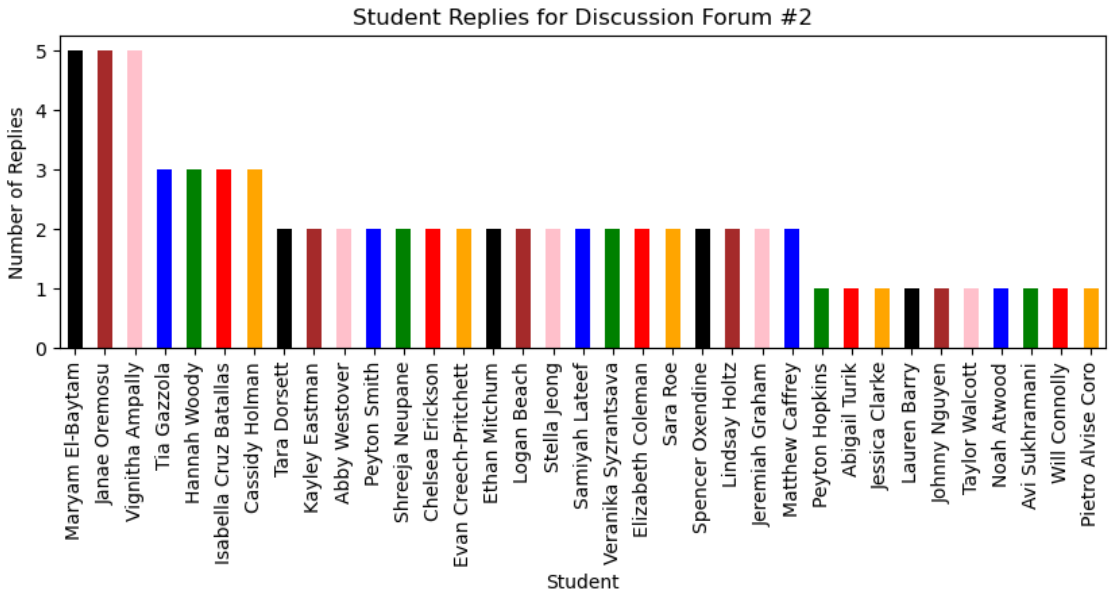

[250]:
```
# 35 Students added reply posts for Discussion 2

df_2_reply_posts['Student Name'].value_counts()
```

[250]:
```
Maryam El-Baytam          5
Janae Oremosu             5
Vignitha Ampally          5
Tia Gazzola               3
Hannah Woody              3
Isabella Cruz Batallas    3
Cassidy Holman            3
Tara Dorsett              2
```

```
Kayley Eastman            2
Abby Westover             2
Peyton Smith              2
Shreeja Neupane           2
Chelsea Erickson          2
Evan Creech-Pritchett     2
Ethan Mitchum             2
Logan Beach               2
Stella Jeong              2
Samiyah Lateef            2
Veranika Syzrantsava      2
Elizabeth Coleman         2
Sara Roe                  2
Spencer Oxendine          2
Lindsay Holtz             2
Jeremiah Graham           2
Matthew Caffrey           2
Peyton Hopkins            1
Abigail Turik             1
Jessica Clarke            1
Lauren Barry              1
Johnny Nguyen             1
Taylor Walcott            1
Noah Atwood               1
Avi Sukhramani            1
Will Connolly             1
Pietro Alvise Coro        1
Name: Student Name, dtype: int64
```

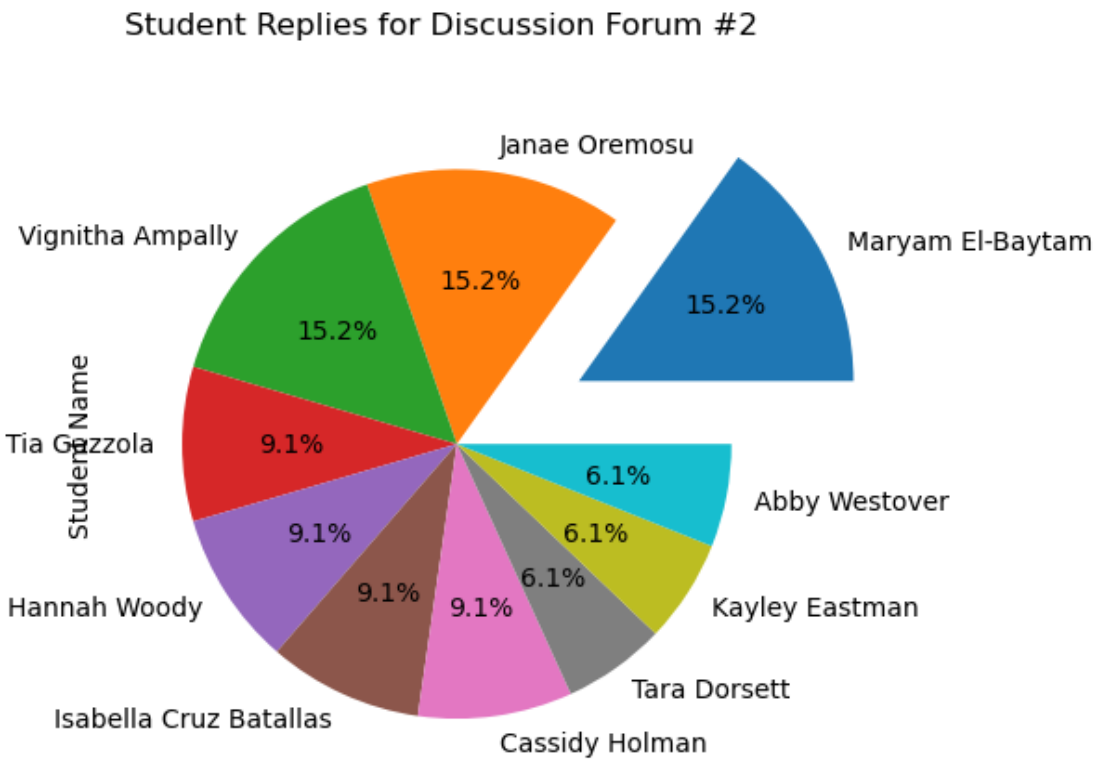
[251]:
```
# Bar plot representing the data above
df_2_reply_posts['Student Name'].value_counts().plot.bar(subplots = True, color␣
↪= {'red','pink','blue','green','black','orange','brown'}, figsize=(10,3))
plt.title("Student Replies for Discussion Forum #2")
plt.xlabel("Student")
plt.ylabel("Number of Replies")
```

[251]:
```
Text(0, 0.5, 'Number of Replies')
```




[252]:
```
# pie chart representing the data above (top 10)
df_2_replies_student_count = df_2_reply_posts['Student Name'].value_counts().
 ↪head(10)
df_2_replies_student_count
myexplode = [0.5, 0, 0, 0, 0, 0, 0, 0, 0, 0]
plot_2 = df_2_replies_student_count.plot.pie(subplots = True, title = "Student␣
 ↪Replies for Discussion Forum #2", autopct='%1.1f%%',explode = myexplode)
plot_2
```

[252]:
```
array([<AxesSubplot: ylabel='Student Name'>], dtype=object)
```



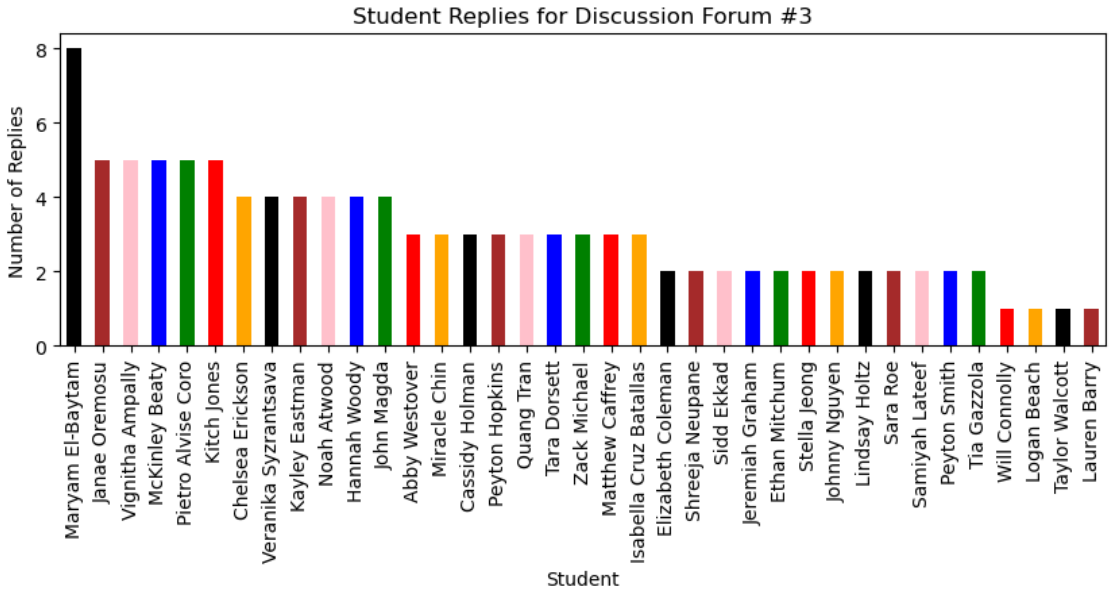

[253]:
```
# 37 Students added reply posts for Discussion 3
df_3_reply_posts['Student Name'].value_counts()
```

[253]:
```
Maryam El-Baytam          8
Janae Oremosu             5
Vignitha Ampally          5
McKinley Beaty            5
Pietro Alvise Coro        5
Kitch Jones               5
Chelsea Erickson          4
Veranika Syzrantsava      4
Kayley Eastman            4
Noah Atwood               4
Hannah Woody              4
John Magda                4
Abby Westover             3
Miracle Chin              3
Cassidy Holman            3
Peyton Hopkins            3
Quang Tran                3
Tara Dorsett              3
```

```
Zack Michael                3
Matthew Caffrey             3
Isabella Cruz Batallas      3
Elizabeth Coleman           2
Shreeja Neupane             2
Sidd Ekkad                  2
Jeremiah Graham             2
Ethan Mitchum               2
Stella Jeong                2
Johnny Nguyen               2
Lindsay Holtz               2
Sara Roe                    2
Samiyah Lateef              2
Peyton Smith                2
Tia Gazzola                 2
Will Connolly               1
Logan Beach                 1
Taylor Walcott              1
Lauren Barry                1
Name: Student Name, dtype: int64
```

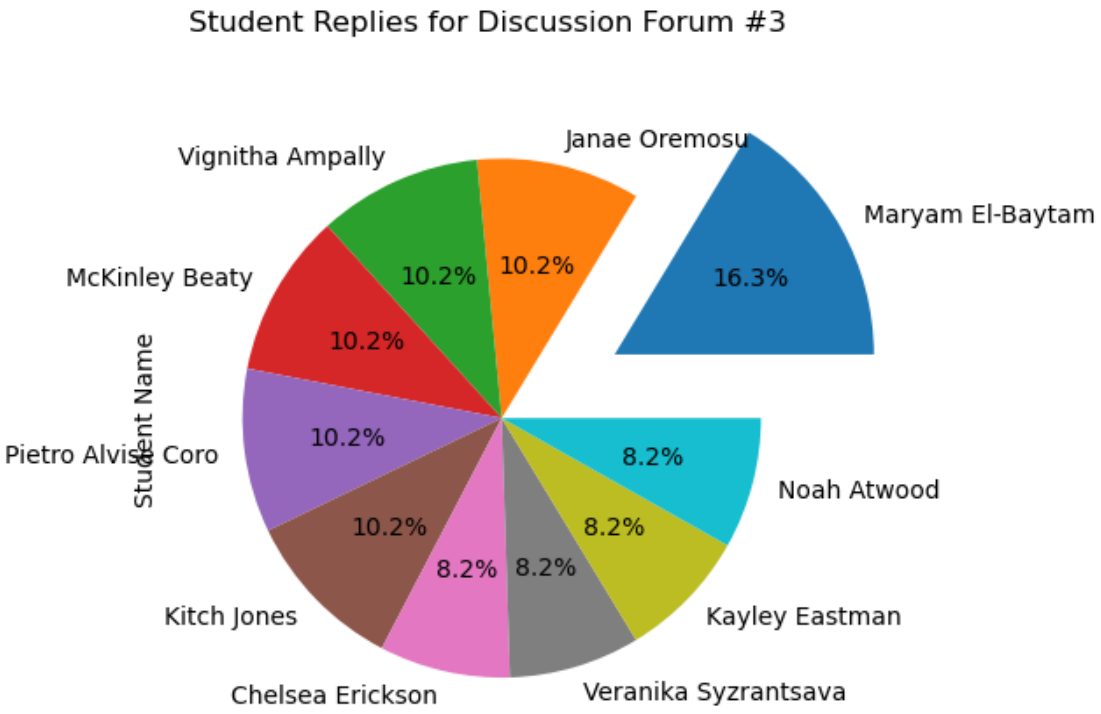
[254]:
```
# Bar plot representing the data above
df_3_reply_posts['Student Name'].value_counts().plot.bar(subplots = True, color␣
 ↪= {'red','pink','blue','green','black','orange','brown'}, figsize=(10,3))
plt.title("Student Replies for Discussion Forum #3")
plt.xlabel("Student")
plt.ylabel("Number of Replies")
```

[254]:
```
Text(0, 0.5, 'Number of Replies')
```



[255]:
```
# pie chart representing the data above (top 10)
df_3_replies_student_count = df_3_reply_posts['Student Name'].value_counts().
 ↪head(10)
df_3_replies_student_count
myexplode = [0.5, 0, 0, 0, 0, 0, 0, 0, 0, 0]
plot_3 = df_3_replies_student_count.plot.pie(subplots = True, title = "Student␣
 ↪Replies for Discussion Forum #3", autopct='%1.1f%%',explode = myexplode)
plot_3
```

[255]:
```
array([<AxesSubplot: ylabel='Student Name'>], dtype=object)
```



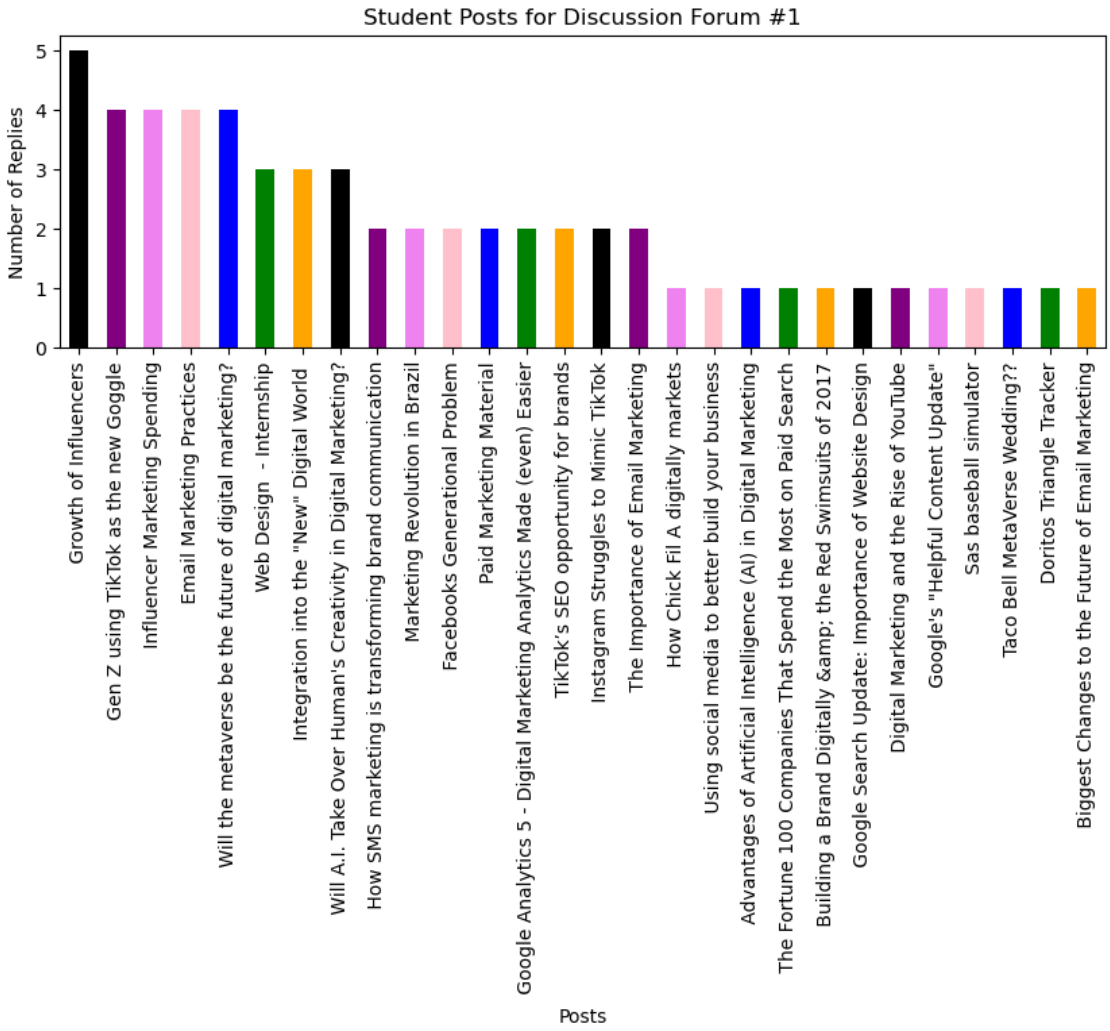

[256]:
```
# 28 original posts got reply posts in discussion 1

df_1_reply_posts['Post Name'].value_counts()
```

[256]:
```
Growth of Influencers                                          5
Gen Z using TikTok as the new Goggle                           4
Influencer Marketing Spending                                  4
Email Marketing Practices                                      4
Will the metaverse be the future of digital marketing?         4
```

```
Web Design  - Internship                                                  3
Integration into the "New" Digital World                                 3
Will A.I. Take Over Human's Creativity in Digital Marketing?             3
How SMS marketing is transforming brand communication                    2
Marketing Revolution in Brazil                                           2
Facebooks Generational Problem                                           2
Paid Marketing Material                                                  2
Google Analytics 5 - Digital Marketing Analytics Made (even) Easier      2
TikTok’s SEO opportunity for brands                                      2
Instagram Struggles to Mimic TikTok                                      2
The Importance of Email Marketing                                        2
How Chick Fil A digitally markets                                        1
Using social media to better build your business                         1
Advantages of Artificial Intelligence (AI) in Digital Marketing          1
The Fortune 100 Companies That Spend the Most on Paid Search             1
Building a Brand Digitally &amp;amp; the Red Swimsuits of 2017           1
Google Search Update: Importance of Website Design                       1
Digital Marketing and the Rise of YouTube                                1
Google's "Helpful Content Update"                                        1
Sas baseball simulator                                                   1
Taco Bell MetaVerse Wedding??                                            1
Doritos Triangle Tracker                                                 1
Biggest Changes to the Future of Email Marketing                         1
Name: Post Name, dtype: int64
```

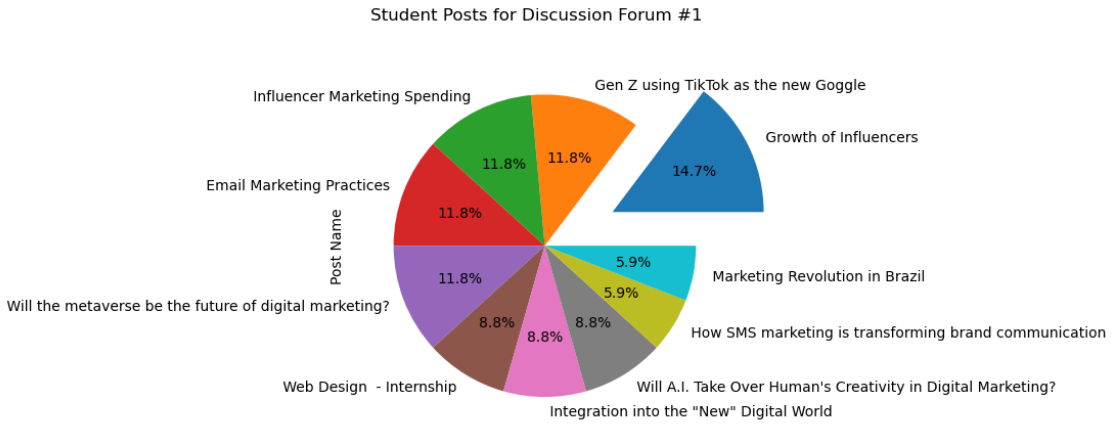
[257]:
```
# Bar plot representing the data above
df_1_reply_posts['Post Name'].value_counts().plot.bar(subplots = True, color =␣
↪{'purple','pink','blue','green','black','orange','violet'}, figsize=(10,3))
plt.title("Student Posts for Discussion Forum #1")
plt.xlabel("Posts")
plt.ylabel("Number of Replies")
```

[257]:
```
Text(0, 0.5, 'Number of Replies')
```




[258]:
```
# pie chart representing the data above (top 10)
df_1_replies_post_count = df_1_reply_posts['Post Name'].value_counts().head(10)
df_1_replies_post_count
myexplode = [0.5, 0, 0, 0, 0, 0, 0, 0, 0, 0]
plot_1_p = df_1_replies_post_count.plot.pie(subplots = True, title = "Student␣
 ↪Posts for Discussion Forum #1", autopct='%1.1f%%',explode = myexplode)
plot_1_p
```

[258]:
```
array([<AxesSubplot: ylabel='Post Name'>], dtype=object)
```



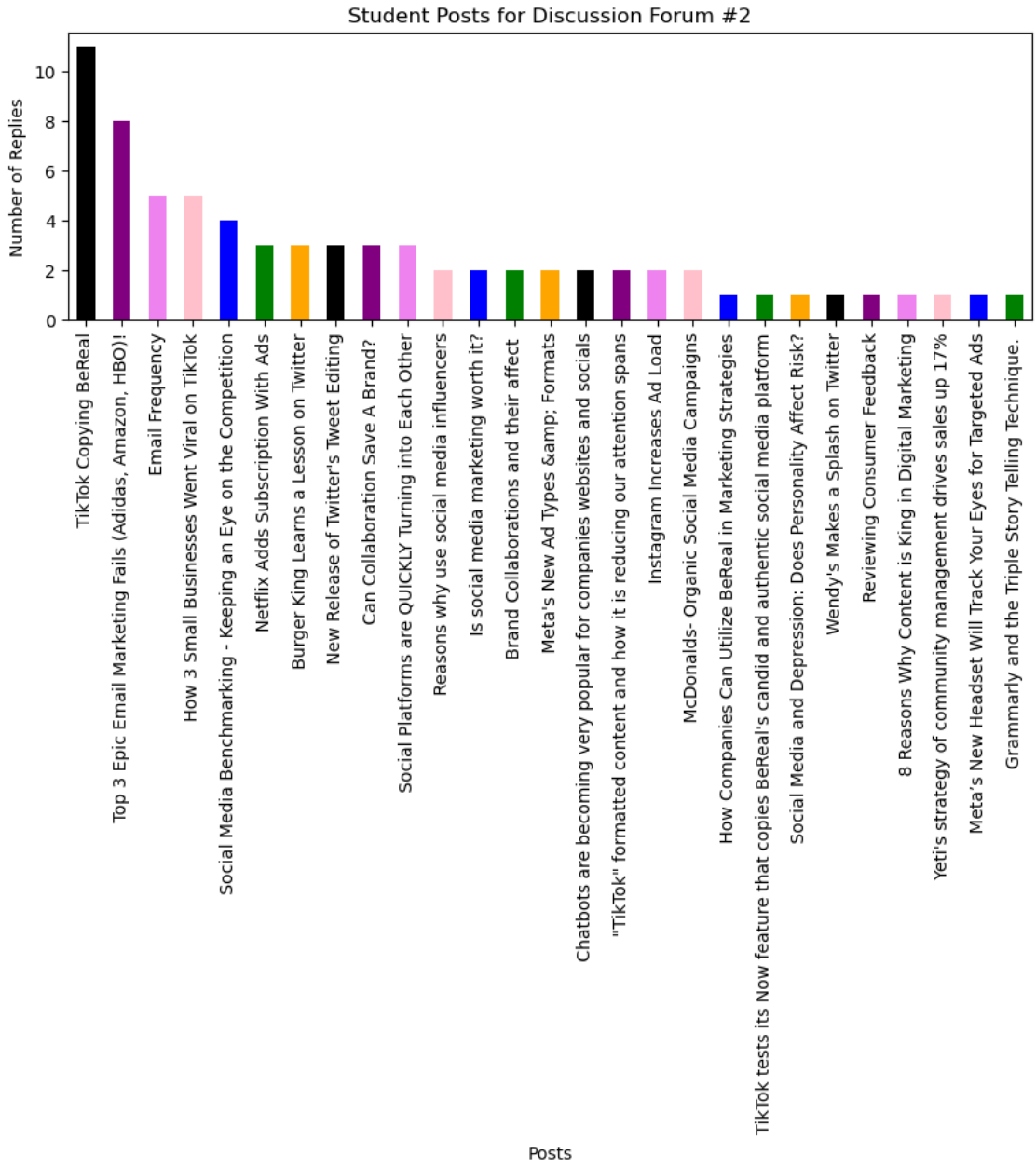

[259]:
```
# 27 original posts got reply posts in discussion 2

df_2_reply_posts['Post Name'].value_counts()
```

[259]:
```
 TikTok Copying BeReal
11
 Top 3 Epic Email Marketing Fails (Adidas, Amazon, HBO)!
8
 Email Frequency
5
 How 3 Small Businesses Went Viral on TikTok
5
 Social Media Benchmarking - Keeping an Eye on the Competition
4
 Netflix Adds Subscription With Ads
3
 Burger King Learns a Lesson on Twitter
3
 New Release of Twitter's Tweet Editing
3
 Can Collaboration Save A Brand?
3
 Social Platforms are QUICKLY Turning into Each Other
3
 Reasons why use social media influencers
2
 Is social media marketing worth it?
2
 Brand Collaborations and their affect
2
 Meta's New Ad Types &amp;amp; Formats
2
```

```
 Chatbots are becoming very popular for companies websites and socials
2
 "TikTok" formatted content and how it is reducing our attention spans
2
 Instagram Increases Ad Load
2
 McDonalds- Organic Social Media Campaigns
2
 How Companies Can Utilize BeReal in Marketing Strategies
1
 TikTok tests its Now feature that copies BeReal's candid and authentic social
media platform     1
 Social Media and Depression: Does Personality Affect Risk?
1
 Wendy's Makes a Splash on Twitter
1
 Reviewing Consumer Feedback
1
 8 Reasons Why Content is King in Digital Marketing
1
 Yeti's strategy of community management drives sales up 17%
1
 Meta’s New Headset Will Track Your Eyes for Targeted Ads
1
 Grammarly and the Triple Story Telling Technique.
1
Name: Post Name, dtype: int64
```

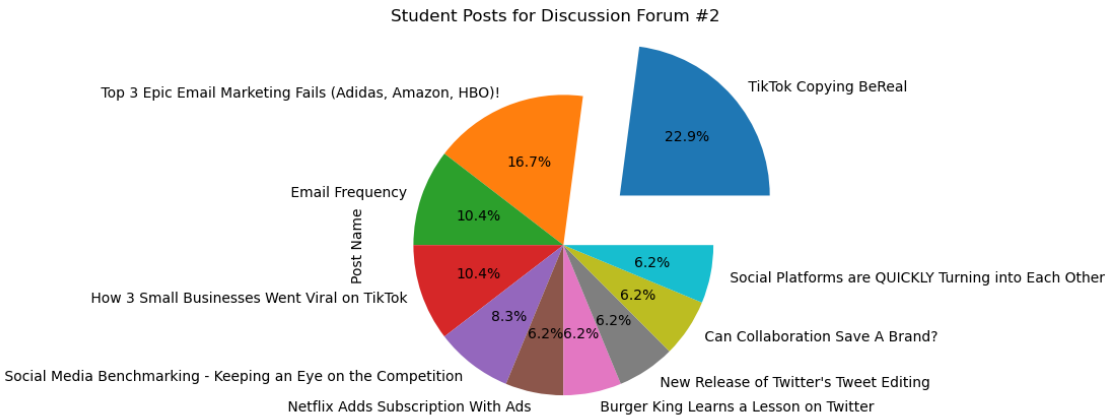
[260]:
```
# Bar plot representing the data above
df_2_reply_posts['Post Name'].value_counts().plot.bar(subplots = True, color =␣
 ↪{'purple','pink','blue','green','black','orange','violet'}, figsize=(10,3))
plt.title("Student Posts for Discussion Forum #2")
plt.xlabel("Posts")
plt.ylabel("Number of Replies")
```

[260]:
```
Text(0, 0.5, 'Number of Replies')
```




[261]:
```
# pie chart representing the data above (top 10)
df_2_replies_post_count = df_2_reply_posts['Post Name'].value_counts().head(10)
df_2_replies_post_count
myexplode = [0.5, 0, 0, 0, 0, 0, 0, 0, 0, 0]
plot_2_p = df_2_replies_post_count.plot.pie(subplots = True, title = "Student␣
 ↪Posts for Discussion Forum #2", autopct='%1.1f%%',explode = myexplode)
plot_2_p
```

[261]:
```
array([<AxesSubplot: ylabel='Post Name'>], dtype=object)
```



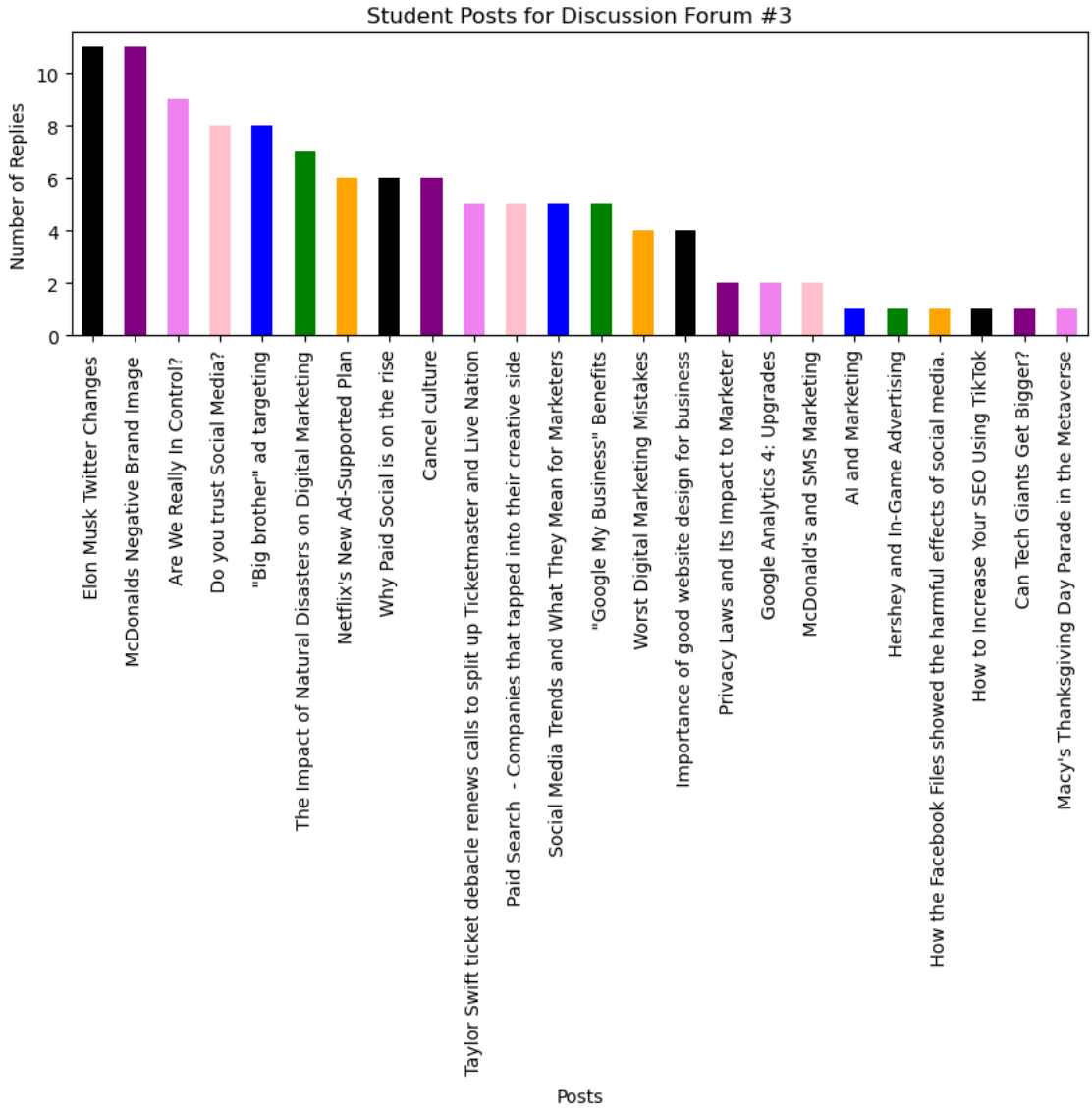

[262]:
```
# 24 original posts got reply posts in discussion 3

df_3_reply_posts['Post Name'].value_counts()
```

[262]:
```
 Elon Musk Twitter Changes
11
 McDonalds Negative Brand Image
11
 Are We Really In Control?
9
 Do you trust Social Media?
8
 "Big brother" ad targeting
8
 The Impact of Natural Disasters on Digital Marketing
7
 Netflix's New Ad-Supported Plan
6
 Why Paid Social is on the rise
6
 Cancel culture
6
 Taylor Swift ticket debacle renews calls to split up Ticketmaster and Live
Nation     5
 Paid Search  - Companies that tapped into their creative side
5
 Social Media Trends and What They Mean for Marketers
5
 "Google My Business" Benefits
5
 Worst Digital Marketing Mistakes
4
```

```
 Importance of good website design for business
4
 Privacy Laws and Its Impact to Marketer
2
 Google Analytics 4: Upgrades
2
 McDonald's and SMS Marketing
2
 AI and Marketing
1
 Hershey and In-Game Advertising
1
 How the Facebook Files showed the harmful effects of social media.
1
 How to Increase Your SEO Using TikTok
1
 Can Tech Giants Get Bigger?
1
 Macy's Thanksgiving Day Parade in the Metaverse
1
Name: Post Name, dtype: int64
```

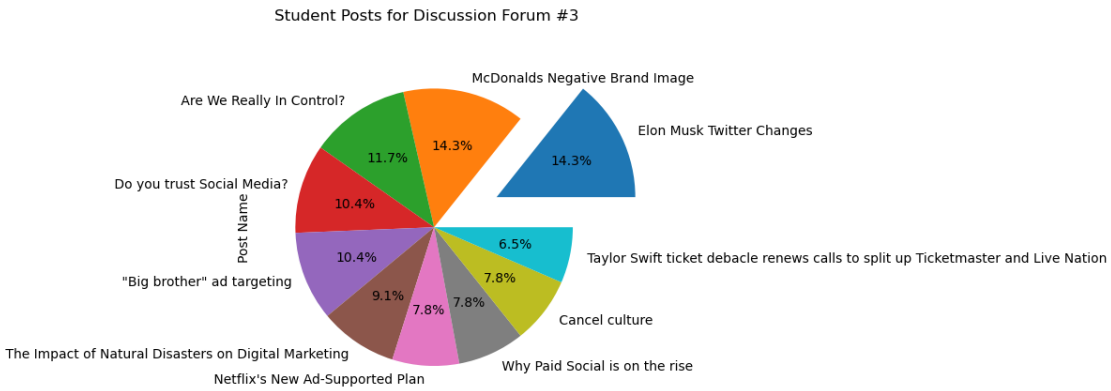
[263]:
```
# Bar plot representing the data above
df_3_reply_posts['Post Name'].value_counts().plot.bar(subplots = True, color =␣
 ↪{'purple','pink','blue','green','black','orange','violet'}, figsize=(10,3))
plt.title("Student Posts for Discussion Forum #3")
plt.xlabel("Posts")
plt.ylabel("Number of Replies")
```

[263]:
```
Text(0, 0.5, 'Number of Replies')
```




[264]:
```
# pie chart representing the data above (top 10)
df_3_replies_post_count = df_3_reply_posts['Post Name'].value_counts().head(10)
df_3_replies_post_count
myexplode = [0.5, 0, 0, 0, 0, 0, 0, 0, 0, 0]
plot_3_p = df_3_replies_post_count.plot.pie(subplots = True, title = "Student␣
↪Posts for Discussion Forum #3", autopct='%1.1f%%',explode = myexplode)
plot_3_p
```

[264]:
```
array([<AxesSubplot: ylabel='Post Name'>], dtype=object)
```




[265]:
```
# list of social media platforms
social_media_platforms = ['facebook',␣
 ↪'youtube','google','snapchat','tiktok','instagram','whatsapp']
```

[266]:
```
# converting content column values from original posts datafram to list
content_list_1 = df_1_original_posts['Content'].tolist()
content_list_2 = df_2_original_posts['Content'].tolist()
content_list_3 = df_3_original_posts['Content'].tolist()
```

[267]:
```
# Create a function that converts every character in the list parameter to␣
 ↪lower case
def to_lower(s):
    for i in range(len(s)):
        s[i] = s[i].lower()

to_lower(content_list_1)
to_lower(content_list_2)
to_lower(content_list_3)
```

[268]:
```
#content_list_3
```

[269]:
```
# Function that helps in counting the presence of the certain word in the posts
def count_social(word, list_name, new_list):
    for x in list_name:
        if word in x:
            new_list.append(x)
    counter = 0
    for c in new_list:
        counter += 1
    return counter
```

[270]:
```
# Counts the number of original posts that have the word 'instagram'
insta_1 = [ ]
insta_2 = [ ]
insta_3 = [ ]
print(count_social('instagram',content_list_1,insta_1))
print(count_social('instagram',content_list_2,insta_2))
print(count_social('instagram',content_list_3,insta_3))
```

```
8
8
4
```

[271]:
```
# Counts the number of original posts that have the word 'facebook'
fb_1 = [ ]
fb_2 = [ ]
fb_3 = [ ]
print(count_social('facebook',content_list_1,fb_1))
print(count_social('facebook',content_list_2,fb_2))
print(count_social('facebook',content_list_3,fb_3))
```

```
7
5
5
```

[272]:
```
# Counts the number of original posts that have the word 'snapchat'
snapchat_1 = [ ]
snapchat_2 = [ ]
snapchat_3 = [ ]
print(count_social('snapchat',content_list_1,snapchat_1))
print(count_social('snapchat',content_list_2,snapchat_2))
print(count_social('snapchat',content_list_3,snapchat_3))
```

```
1
1
0
```

[273]:
```
# Counts the number of original posts that have the word 'google'
google_1 = [ ]
google_2 = [ ]
google_3 = [ ]
print(count_social('google',content_list_1,google_1))
print(count_social('google',content_list_2,google_2))
print(count_social('google',content_list_3,google_3))
```

```
8
2
8
```

[274]:
```
# Counts the number of original posts that have the word 'twitter'
twitter_1 = [ ]
twitter_2 = [ ]
twitter_3 = [ ]
print(count_social('twitter',content_list_1,twitter_1))
print(count_social('twitter',content_list_2,twitter_2))
print(count_social('twitter',content_list_3,twitter_3))
```

```
1
4
3
```

[275]:
```
# Counts the number of original posts that have the word 'linkedin'
linkedin_1 = [ ]
linkedin_2 = [ ]
linkedin_3 = [ ]
print(count_social('linkedin',content_list_1,linkedin_1))
print(count_social('linkedin',content_list_2,linkedin_2))
print(count_social('linkedin',content_list_3,linkedin_3))
```

```
0
1
0
```

[276]:
```
# Counts the number of original posts that have the word 'youtube'
youtube_1 = [ ]
youtube_2 = [ ]
youtube_3 = [ ]
print(count_social('youtube',content_list_1,youtube_1))
print(count_social('youtube',content_list_2,youtube_2))
print(count_social('youtube',content_list_3,youtube_3))
```

```
5
4
2
```

[277]:
```
# Counts the number of original posts that have the word 'whatsapp'
whatsapp_1 = [ ]
whatsapp_2 = [ ]
whatsapp_3 = [ ]
print(count_social('whatsapp',content_list_1,whatsapp_1))
print(count_social('whatsapp',content_list_2,whatsapp_2))
print(count_social('whatsapp',content_list_3,whatsapp_3))
```

```
0
1
0
```

[278]:
```
# Counts the number of original posts that have the word 'pinterest'
pinterest_1 = [ ]
pinterest_2 = [ ]
pinterest_3 = [ ]
print(count_social('pinterest',content_list_1,pinterest_1))
print(count_social('pinterest',content_list_2,pinterest_2))
print(count_social('pinterest',content_list_3,pinterest_3))
```

```
1
0
0
```

[279]:
```
# Counts the number of original posts that have the word 'tiktok'
tiktok_1 = [ ]
tiktok_2 = [ ]
tiktok_3 = [ ]
print(count_social('tiktok',content_list_1,tiktok_1))
print(count_social('tiktok',content_list_2,tiktok_2))
print(count_social('tiktok',content_list_3,tiktok_3))
```

```
9
15
6
```

Key Takeaways = Omnisend, trimark, roi revolution, 3Q dept

[280]:
```
# Counts the number of original posts that have the word 'omnisend'
omnisend_1 = [ ]
omnisend_2 = [ ]
omnisend_3 = [ ]
print(count_social('omnisend',content_list_1,omnisend_1))
print(count_social('omnisend',content_list_2,omnisend_2))
print(count_social('omnisend',content_list_3,omnisend_3))
```

```
5
1
0
```

[281]:
```
# Counts the number of original posts that have the word 'trimark'
trimark_1 = [ ]
trimark_2 = [ ]
trimark_3 = [ ]
print(count_social('trimark',content_list_1,trimark_1))
print(count_social('trimark',content_list_2,trimark_2))
print(count_social('trimark',content_list_3,trimark_3))
```

```
0
5
1
```

[282]:
```
# Counts the number of original posts that have the word 'roi revolution'
roi_rev_1 = [ ]
roi_rev_2 = [ ]
roi_rev_3 = [ ]
print(count_social('roi revolution',content_list_1,roi_rev_1))
print(count_social('roi revolution',content_list_2,roi_rev_2))
print(count_social('roi revolution',content_list_3,roi_rev_3))
```

```
0
0
0
```

[283]:
```
# Counts the number of original posts that have the word '3q'
threeQ_1 = [ ]
threeQ_2 = [ ]
threeQ_3 = [ ]
print(count_social('3q',content_list_1,threeQ_1))
print(count_social('3q',content_list_2,threeQ_2))
print(count_social('3q',content_list_3,threeQ_3))
```

```
0
0
0
```

[284]:
```
# Reading in social media platform data collected from the values above
social_media_p = pd.read_csv("Social Media Platforms - Sheet1.csv")
social_media_p.set_index("Platform Name", inplace = True)
social_media_p
```

[284]:

| Platform Name | Discussion Forum #1 | Discussion Forum #2 | Discussion Forum #3 |
|---|---|---|---|
| Instagram | 8 | 8 | 4 |
| Facebook | 7 | 5 | 5 |
| Snapchat | 1 | 1 | 0 |
| Google | 8 | 2 | 8 |
| Twitter | 1 | 4 | 3 |
| LinkedIn | 0 | 1 | 0 |
| Youtube | 5 | 4 | 2 |
| Whatsapp | 0 | 1 | 0 |
| Pinterest | 1 | 0 | 0 |
| Tiktok | 9 | 15 | 6 |

[285]:
```
# Bar plot representing the data above
social_media_p.plot.bar(figsize=(10,5), color = {'pink','green','blue'})
plt.title("Usage of Social Media Platform Words")
plt.xlabel("Social Media Platform")
plt.ylabel("Number of Replies with the word usage")
```

[285]: Text(0, 0.5, 'Number of Replies with the word usage')