Analytics Honors Report

POOLE COLLEGE OF MANAGEMENT

Prepared by

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PROCESS

PYTHON

- Obtained .csv files for each discussion forum from **Professor Nealon.**
- Uploaded the files in **NCSU JupyterHub** to clean the data utilizing the code.
- **Cleaning the data**: removed irrelevant data fields and other information to create finalized datasets (Total 3 data frames).
- Renamed the column names.
- Added 'Post Status' column to **classify posts**: Original Posts and Reply Posts

EXAMPLE:
Finalized Data frame for Discussion Forum #1

	ID	Discussion No.	ParentID	UserID	Student Name	Created	Modified	Post Name	Content	Word Count	Character Count	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	Reply Post
4	28728	17095	0	135641	Sara Roe	1661365679	1661365679	Google Analytics 5 - Digital Marketing Analyti...	During my marketing internship, I have worked ...	211	1201	Original Post
...	...	...	...	...	...	...	...	...	...	...	...	...
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	Reply Post
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	Original Post
96	158767	72595	0	103540	Miracle Chin	1663298313	1663298313	The importance of Pinterest in mobile marketing	"https:www.forbes.comsitesforbesbusinesscounci...	245	1245	Original Post
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	Original Post
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	Reply Post

Given Information

Number of Students Enrolled in the course: 45 Students

Expected Original Discussion Posts for each Forum: 45 Posts

Note: A minimum of 5 quality comments (reply posts) for the semester are recommended for excellent participation.

Reply Post Estimation: 225 reply posts per discussion Forum

Data Collected

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

Forum #2

- **Four** Students did not submit their posts as only **41** original posts are present.
- **Observation**: **No change** in the number of original posts from Forum #1.
- There were only **73** reply posts for this forum. This indicates that not all students followed the recommendation given for excellent participation.
- **Observation**: # of reply posts **increased** from Forum #1 by **15** reply posts.

Forum #3

- **Ten** Students did not submit their posts as only **35** original posts are present.
- **Observation**: There is a **decrease** in the number of original posts from Forum #2. **Six** more students did not post in this forum.
- There were only **112** reply posts for this forum. This indicates that not all students followed the recommendation given for excellent participation.
- **Observation**: # of reply posts **increased** from Forum #2 by **39** reply posts.

Forum #1

- **Four** Students did not submit their posts as only **41** original posts are present.
- There were only **58** reply posts for this forum. This indicates that not all students followed the recommendation given for excellent participation.
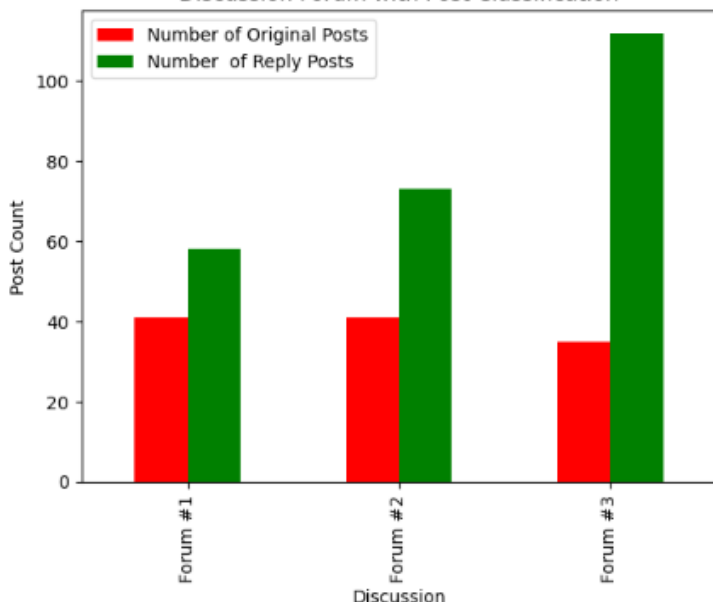
Forum Data Chart

- **DECREASE** in Original Post submission participation

  Indication: Fewer Students submitted their original posts towards the end of the semester.

- **INCREASE** in Reply Post submission participation

  Indication: More Students responded with reply posts towards the end of the semester.

Key Findings

28 Students added reply posts for Discussion No.1

|	
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
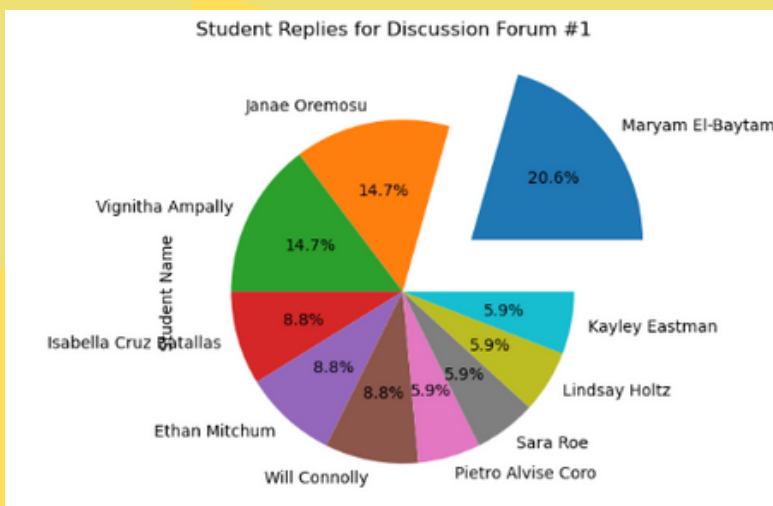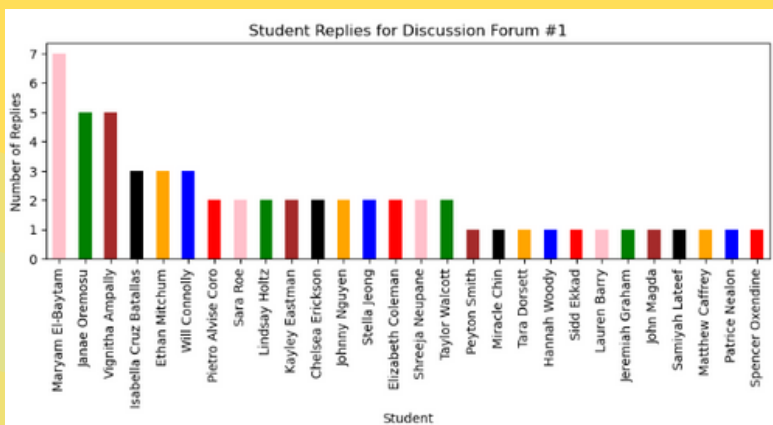
- **Three Students** followed the forum recommendation by posting at least 5 comments: **Maryam, Janae, Vignitha.**

- **17 Students** did not post any comments for any original posts.

- **Maryam El-Baytam** has posted the highest number for comments for discussion forum **#1.**

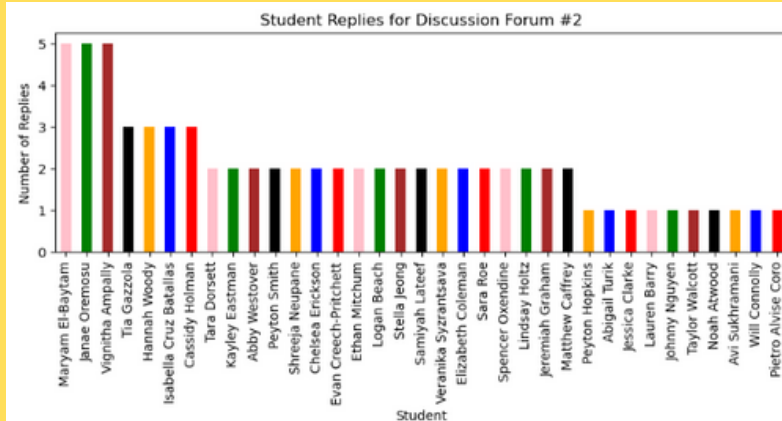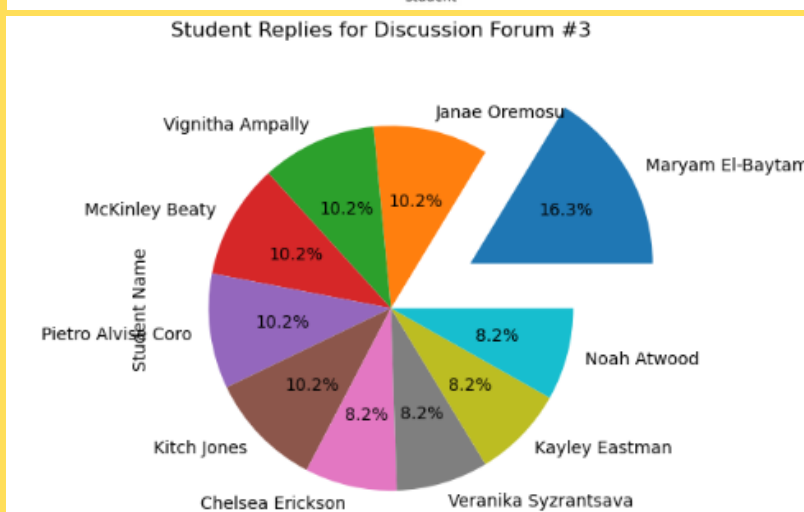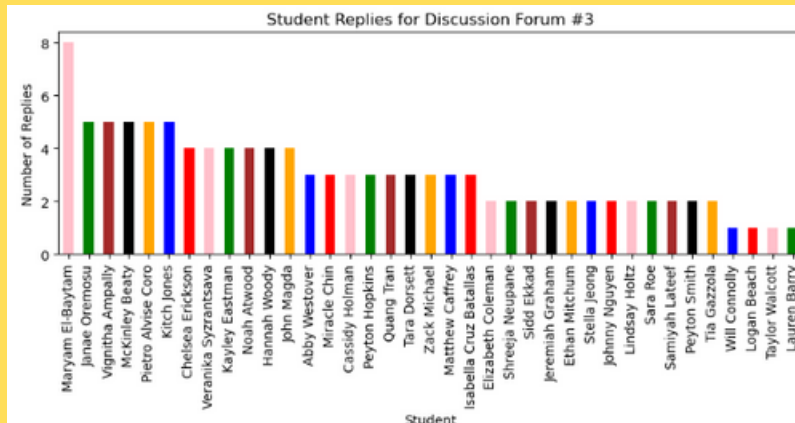# # 35 Students added reply posts for Discussion No.2

- **Same Three Students** followed the forum recommendation by posting at least 5 comments: **Maryam, Janae, Vignitha.**

- **10 Students** did not post any comments for any original posts.

- This time, **7 more** students responded to posts compared to Forum #1.

- **Maryam El-Baytam** has posted the highest number for comments for discussion forum #2.

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

Student Replies for Discussion Forum #2

Student Replies for Discussion Forum #2
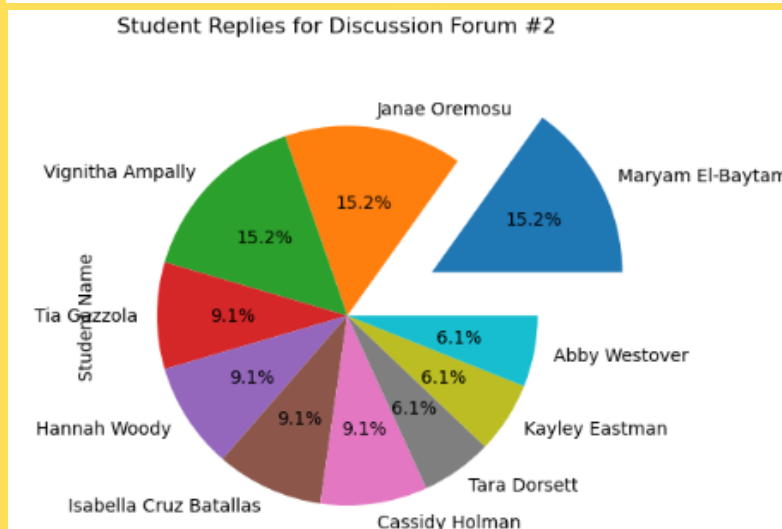
37 Students added reply posts for Discussion No.3

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

Student Replies for Discussion Forum #3


Student Replies for Discussion Forum #3

- **Six Students** followed the forum recommendation by posting at least 5 comments: **Maryam, Janae, Vignitha, McKinley, Pietro, Kitch.**

- This time, **3 more** students responded to posts with at least 5 comments.

- **8 Students** did not post any comments for any original posts.

- This time, **2 more** students responded to posts compared to Forum #2.

- **Maryam El-Baytam** has posted the highest number for comments for discussion forum #3.

Key Findings Continued

**# 28 original posts received reply posts in Discussion No. 1**

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 & 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

Student Posts for Discussion Forum #1

Student Posts for Discussion Forum #1
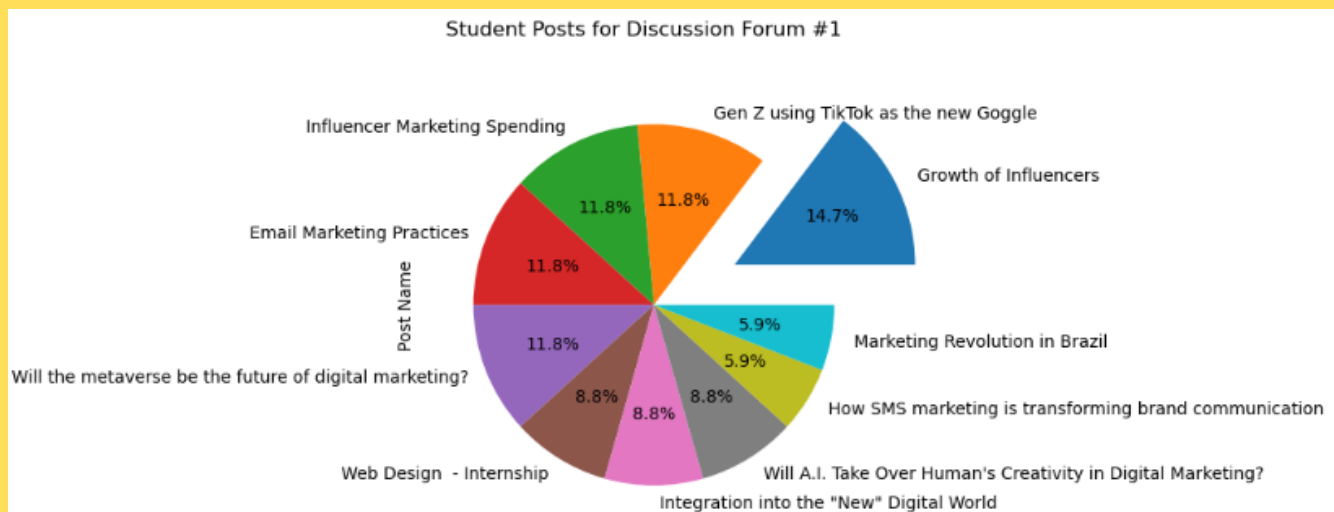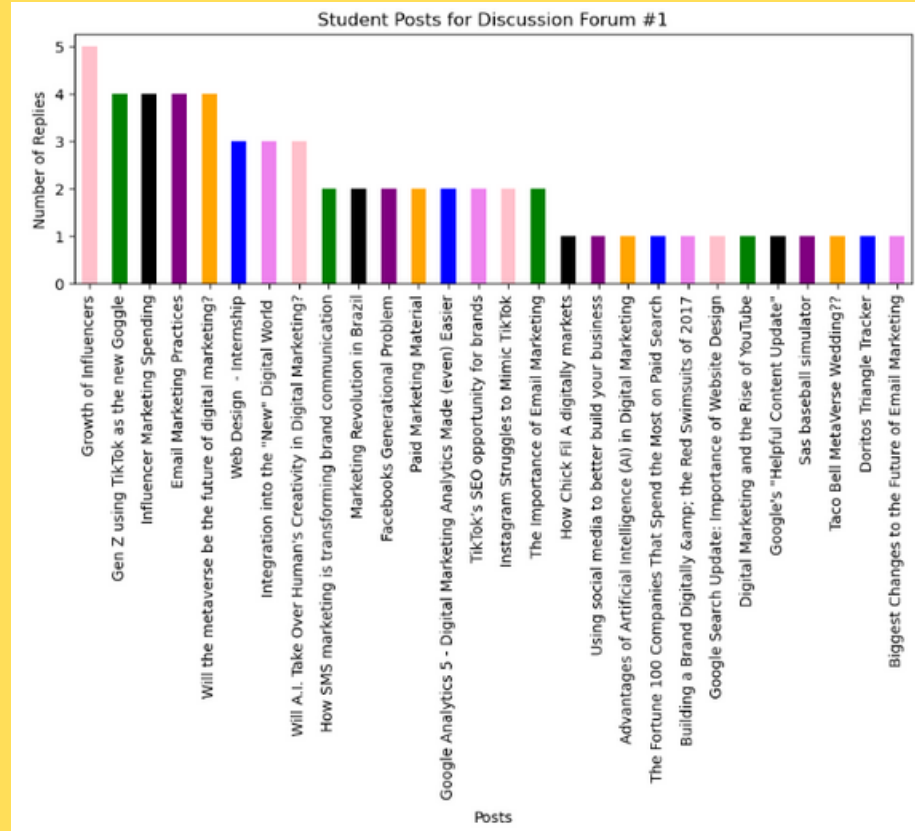
- **The top five posts with most replies include:**
a. *Growth of Influencers* **with 5 replies**
b. *Gen Z using TikTok as the new Goggle* **with 4 replies**
c. *Influencer Marketing Spending* **with 4 replies**
d. *Email Marketing Practices* **with 4 replies**
e. *Will the metaverse be the future of digital marketing?* **with 4 replies**

- **The Post Named 'Growth of Influencers' received the most replies.**

 # 27 original posts received reply posts in Discussion No. 2

Student Posts for Discussion Forum #2

|	
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 & 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

Student Posts for Discussion Forum #2
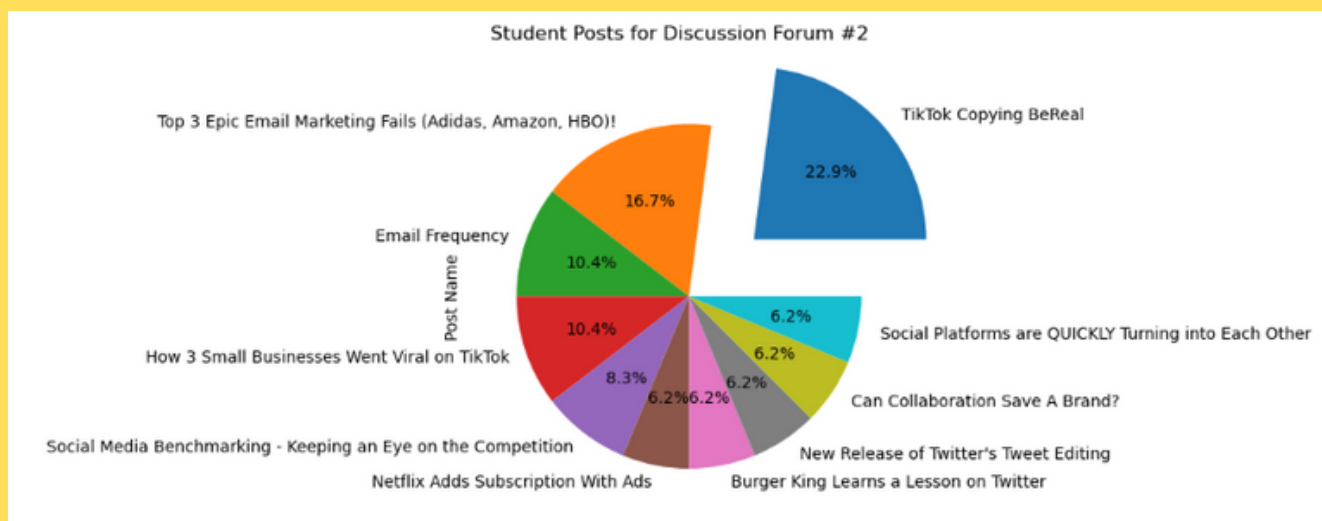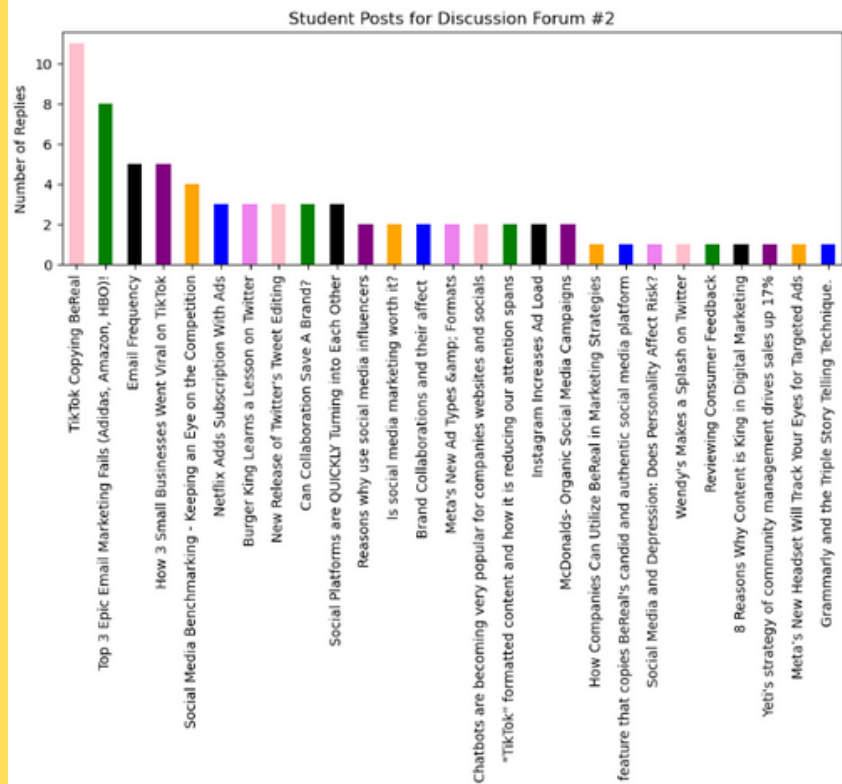
- **The top five posts with most replies include:**
a. *TikTok Copying BeReal* **with 11 replies**
b. *Top 3 Epic Email Marketing Fails (Adidas, Amazon, HBO)!* **with 8 replies**
c. *Email Frequency* **with 5 replies**
d. *How 3 Small Businesses Went Viral on TikTok* **with 5 replies**
e. *Social Media Benchmarking - Keeping an Eye on the Competition* **with 4 replies**

- **The Post Named 'TikTok Copying BeReal' received the most replies.**

24 original posts received reply posts in Discussion No. 3

Student Posts for Discussion Forum #3
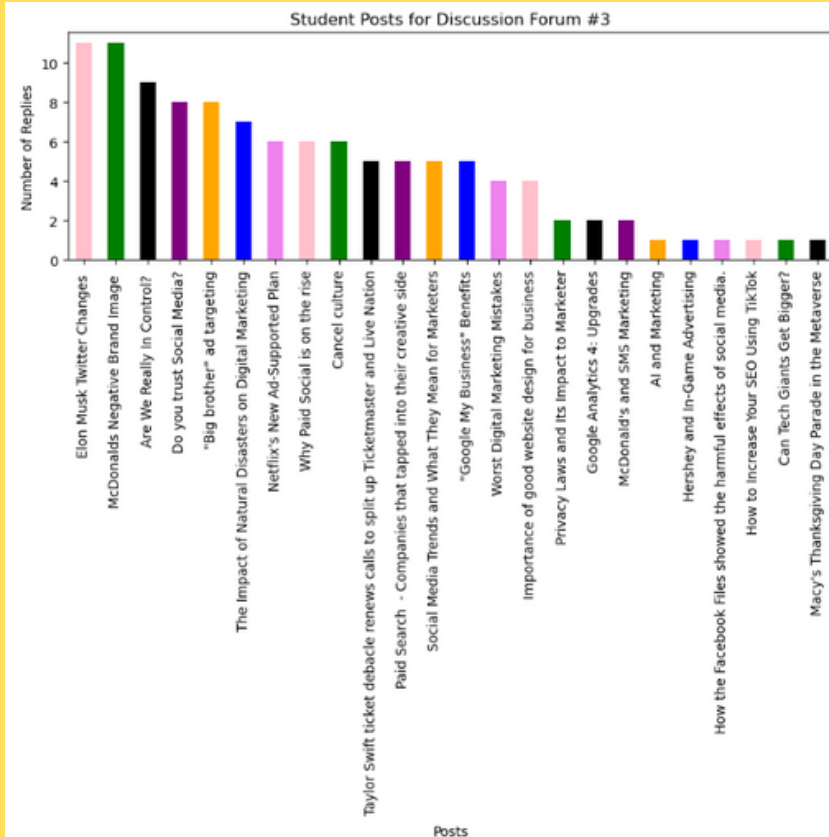
Post Name	Number of Replies
Elon Musk Twitter Changes	11
McDonalds Negative Brand Image	11
Are We Really In Control?	9
Do you trust Social Media?	8
"Big brother" ad targeting	8
The Impact of Natural Disasters on Digital Marketing	7
Netflix's New Ad-Supported Plan	6
Why Paid Social is on the rise	6
Cancel 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

Student Posts for Discussion Forum #3
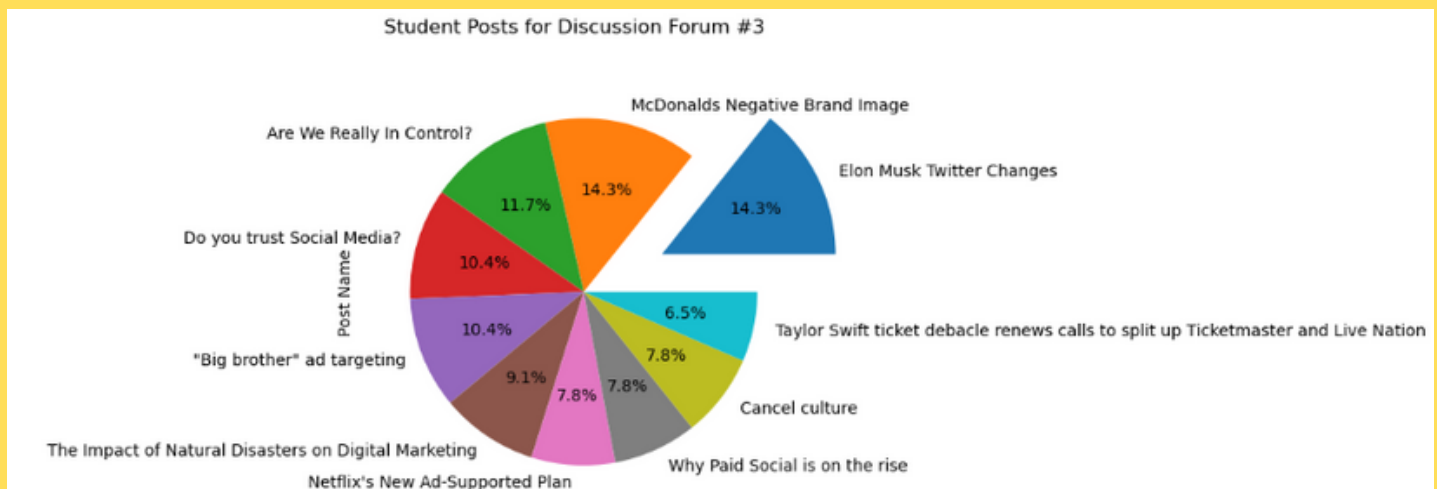
- The **top five posts** with most replies include:
  a. *Elon Musk Twitter Changes* with 11 replies
  b. *McDonalds Negative Brand Image* with 11 replies
  c. *Are We Really In Control?* with 9 replies
  d. *Do you trust Social Media?* with 8 replies
  e. *"Big brother" ad targeting* with 8 replies

- **The Post Named 'Elon Musk Twitter Changes' received the most replies.**

Digital Marketing Social Media Platforms

Instagram	Facebook	Snapchat	Twitter	LinkedIn	Youtube	Pinterest	TikTok	Google	WhatsApp

DATA demonstrating the usage of the social media platform words in the Original Posts

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
Total	40	41	28

Usage of Social Media Platform Words
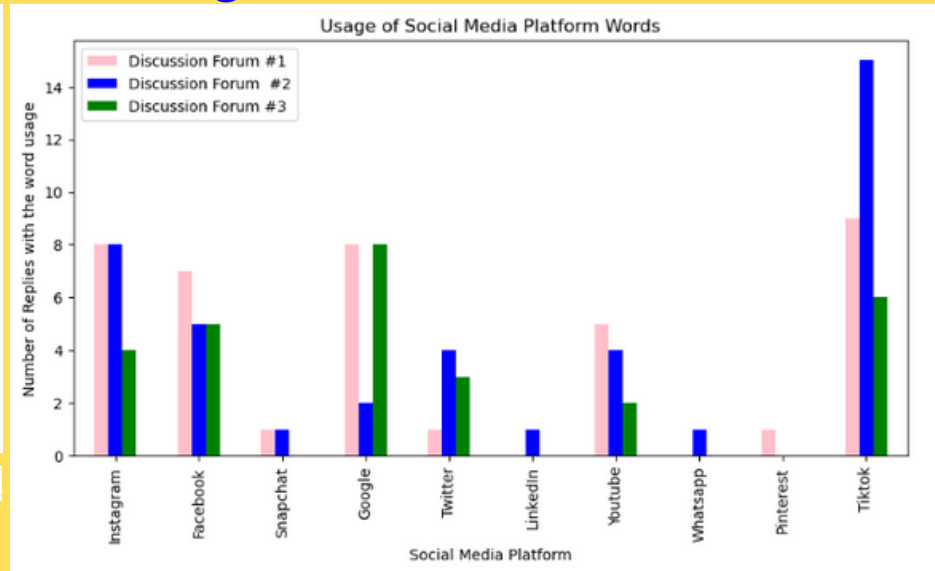
Key Findings

- **During the time period where Discussion Forum #1 was open, more students focused on writing posts involving the social media platforms *TikTok, Instagram, and Google*.**
- **During the time period where Discussion Forum #2 was open, more students focused on writing posts involving the social media platform *TikTok, Instagram, Facebook*.**
- **During the time period where Discussion Forum #3 was open, more students focused on writing posts involving the social media platform *Google, TikTok, Facebook*.**

- **During the time period where Discussion Forum #1 was open, 40 of the posts involved at least one of the social media platform keywords displayed above.**
- **During the time period where Discussion Forum #2 was open, 41 of the posts involved at least one of the social media platform keywords displayed above.**
- **During the time period where Discussion Forum #3 was open, 28 of the posts involved at least one of the social media platform keywords displayed above.**

OBSERVATION: The usage of these words decreased by the time we reached to Forum #3.

Based on the bar plot above, we can see that the least discussed social media platforms in our class during the discussion forum time periods include Snapchat, LinkedIn, WhatsApp, Pinterest.

Other Findings

- **Five students talked about *Omnisend* in Discussion Forum #1. (5 original posts)**
- **One student talked about *Omnisend* in Discussion Forum #2. (1 original post)**
- **Five students talked about *Trimark* in Discussion Forum #2. (5 original posts)**
- **One student talked about *Trimark* in Discussion Forum #2. (1 original post)**

IMPLICATION: Key Takeaways are indeed very helpful in explaining the digital marketing concepts.