

What 733 Posts Taught Me About Emotion, Engagement, and Strategy



HOW DATA LED DECISIONS CAN DRIVE EMOTIONAL ACTION

Project Overview & Purpose

Leveraging real-world social media data, this project applied data-driven marketing analysis to **uncover patterns in sentiment, engagement, timing, and geography**. The goal was to **transform AI-tagged emotional and engagement data into insights** that help marketers maximize their digital campaigns

01

Data Source: 700+ social media posts with AI-tagged emotional sentiment

02

Objective: Uncover insights that marketers can use to optimize when and how content is shared

03

Outcome: Uncovered trends, key findings, and marketing recommendations derived from analysis

Timeline Layout

01

Pre-Processed by AI

Sentiment & emotional tone applied (NLP)

02

Data Cleaning

Removed duplicates & errors, standardized columns, converted timestamps, etc.

03

Data Transformation

Engineered new classifications for time-of-day, region, and platform variables

04

Exploratory Analysis

Created pivot tables, heat maps, bar charts, line plots, aggregated values using SUM AVG COUNT,

05

Strategic Insight

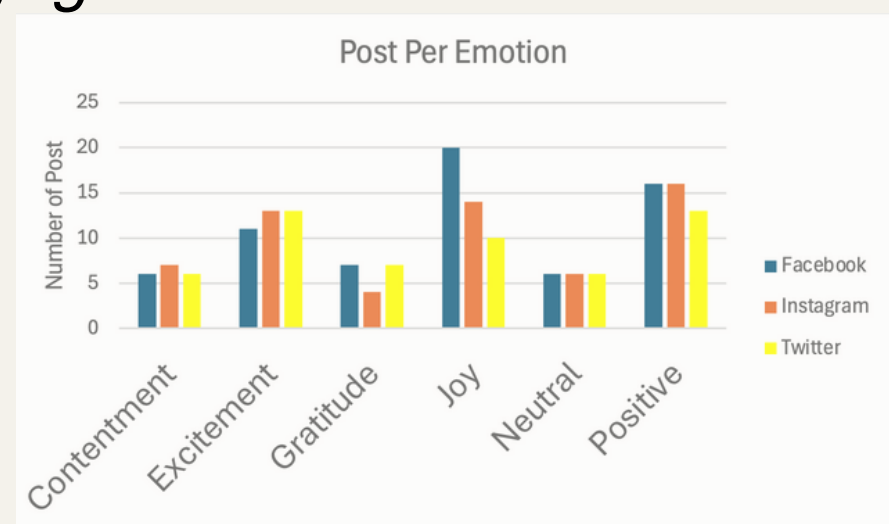
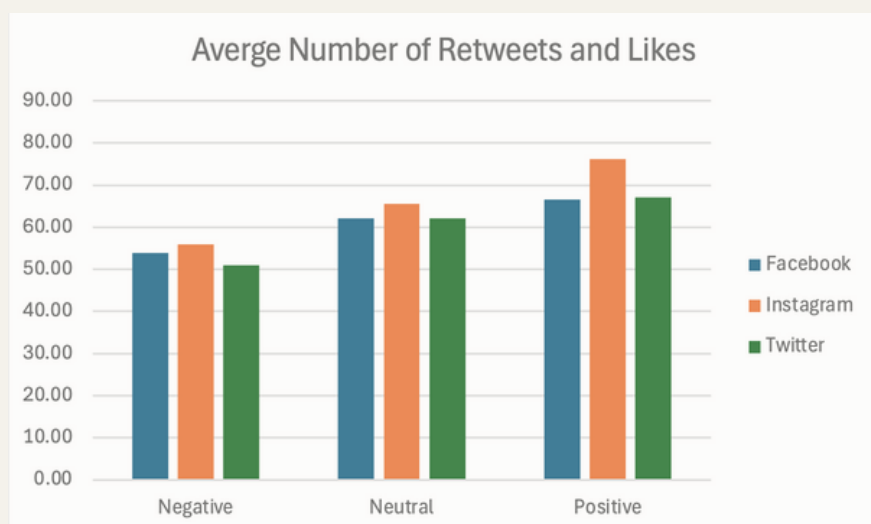
Identified optimal timing, emotional tone, regional tendencies, and platform usage

Emotional Sentiment Breakdown

Positive Posts Outperform Across All Platforms

Positive emotions, especially Joy and Positivity, correlate with modestly higher likes and retweets across all platforms. Emotion drives attention!

Center campaigns around uplifting content, and watch the engagement rise!



Geographic Trends

High Activity ≠ High Sentiment

USA is the most active country, followed by the UK & India. However the influx did not lead to increased positivity. Each top three country had approximately of all 10% post classified as negative.

The most active countries have an overwhelming majority of neutral posts. Consider adjusting strategies to create more emotional reactions.

High volume does not guarantee positivity

Row Labels	 Negative	Neutral	Positive
Australia	6.67%	77.33%	16.00%
Canada	11.11%	50.37%	38.52%
India	8.57%	70.00%	21.43%
UK	10.49%	54.55%	34.97%
USA	10.11%	53.19%	36.70%

Time-Based Trends

Timing is Everything, post when it matters most

Engagement is highest during the evening hours, peaking between 8 PM and 10 PM. A secondary engagement window opens between 1 PM and 3 PM. With high engagement rates and lower post volume, the numbers suggest a window of opportunity to amplify brand voice.

Strategically posting between 1-3 PM or 8-10 PM could maximize visibility and reach

Row Labels	Sum of Total Engagement
0	53
2	54
3	162
5	83
6	209
7	433
8	1411
9	1549
10	1885
11	2093
12	2345
13	2063
14	5872
15	2855
16	4061
17	3058
18	4387
19	5032
20	3739
21	2705
22	2504
23	595
Grand Total	47148

Row Labels	Average of Likes	Average of Retweets
0	35.00	18.00
2	36.00	18.00
3	36.00	18.00
5	55.00	28.00
6	34.75	17.50
7	41.29	20.57
8	40.96	20.39
9	36.89	18.43
10	41.90	20.93
11	37.73	18.84
12	41.03	20.68
13	45.77	23.00
14	41.59	20.88
15	40.45	20.30
16	39.17	19.68
17	42.44	21.27
18	44.95	22.54
19	44.77	22.32
20	49.74	25.04
21	43.95	22.02
22	50.52	25.36
23	56.57	28.43
Grand Total	42.90	21.51

Row Labels	Count of Text
0	1
2	1
3	3
5	1
6	4
7	7
8	23
9	28
10	30
11	37
12	38
13	30
14	94
15	47
16	69
17	48
18	65
19	75
20	50
21	41
22	33
23	7
Grand Total	732

Platform Specific Engagement

Instagram Shines, Facebook Balances, and Twitter Times it Right

Across all platforms, Instagram leads in positive engagement, making it ideal for emotionally-driven content. Facebook performs reliably across all sentiment types, while Twitter’s strength lies in morning-time relevance. Afternoon hours remain the golden window for maximizing reach and impact.

Avg. Engagement Column Labels ▼				
Row Labels	▼ Negative	Neutral	Positive	Grand Total
Facebook	53.95	62.20	66.65	62.84
Instagram	55.92	65.50	76.24	67.69
Twitter	50.96	62.18	67.04	62.42
Grand Total	53.53	63.39	70.00	64.41

# of Post Column Labels ▼				
Row Labels	▼ Afternoon	Evening	Morning	Grand Total
Facebook	101	95	35	231
Instagram	129	90	39	258
Twitter	96	86	61	243
Grand Total	326	271	135	732

Insights & Real World Marketing Recommendations

- 01 Use stronger emotional hooks and focus campaigns around positive, joyful content
- 02 Post on Instagram during evening hours to capitalize on positivity & engagement
- 03 Leverage Twitter for time-sensitive or trending content
- 04 Tailor scheduled Facebook content for consistency & broad reach

Case Reflection

This project strengthened my ability to analyze how emotional tone, timing, and geography impact engagement. These skills are essential for marketers making fast data-informed decisions. Social insights help brands optimize content, boost ROI, and better connect with audiences.

01

Gained hands-on experience in cleaning, pivoting, and visualizing real-world social data

02

Learned how emotional tone, time, and geography drive marketing outcomes

03

Strengthened ability to transform raw data into strategic marketing decisions

What do you think
about the future of
AI & Data in marketing?



SHARE
YOUR
THOUGHTS



SAVE
FOR
LATER



LIKE
THIS
POST

Thanks for reading!