

Facebook Data Analysis

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Data Dictionary

01

Type

Type of post. Possible outcomes are "link", "photo", "status" and "video"

02

Paid

0 = unsolicited post
1 = paid post

03

Lifetime Engaged Users

Lifetime number of people who clicked anywhere in your posts



Like, Comment, Share, Total Interactions

Number of likes, comments, or shares on post. Total Interactions is the sum.

04

Post Weekday, Time, Month

When the media was posted

05

Lifetime Post Total Reach

Lifetime number of unique individuals who saw the post appear on their newsfeed

06

Day of the Week Matters

At a 95% significance level, post weekday has an effect on shares and total interactions as p-values are $< 5\%$

Post Weekday	Average Likes	Average Comments	Average Shares	Average Total Interactions
Sunday	205	8	25	237
Monday	167	7	27	200
Tuesday	237	14	38	288
Wednesday	219	10	32	261
Thursday	172	6	28	205
Friday	136	5	24	163
Saturday	129	4	21	154

Month Matters

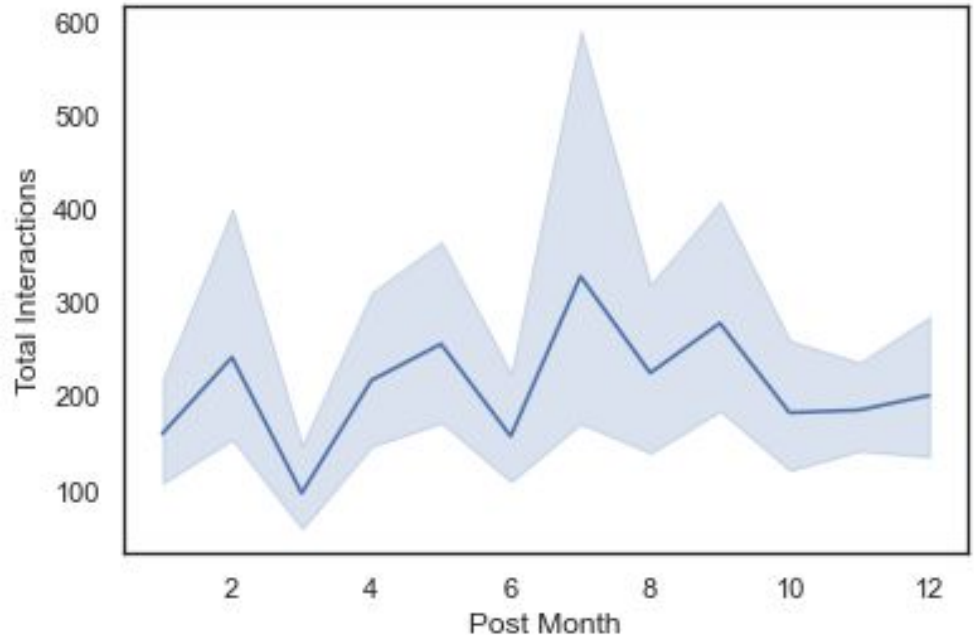
At a 95% significance level, post month has an effect on shares as
 $p\text{-value} < 5\%$

Post Month	Average Likes	Average Comments	Average Shares	Average Total Interactions
January	123	6	32	161
February	193	11	39	242
March	83	3	11	97
April	183	5	29	218
May	216	8	32	256
June	134	6	18	158
July	273	15	41	329
August	198	6	21	225
September	231	11	38	279
October	157	6	24	183
November	154	6	25	186
December	172	6	23	201

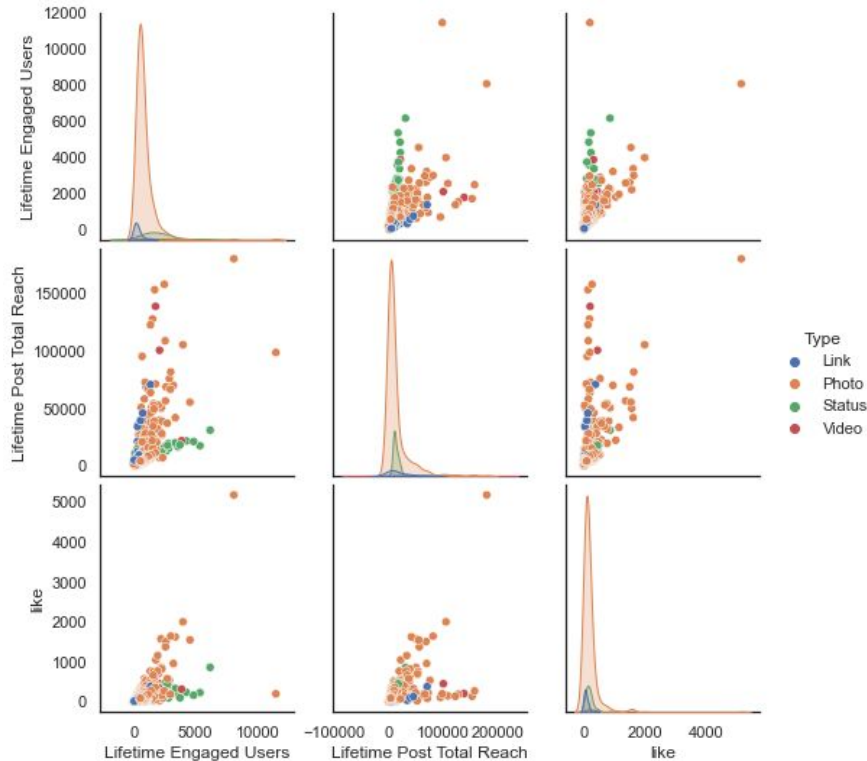
Regression Analysis

Relationship present between interaction and post month

- Spike in July



Exploratory Data Analysis



Type

Photos are the most popular type of post

1

Status

Status has high engagement levels

2

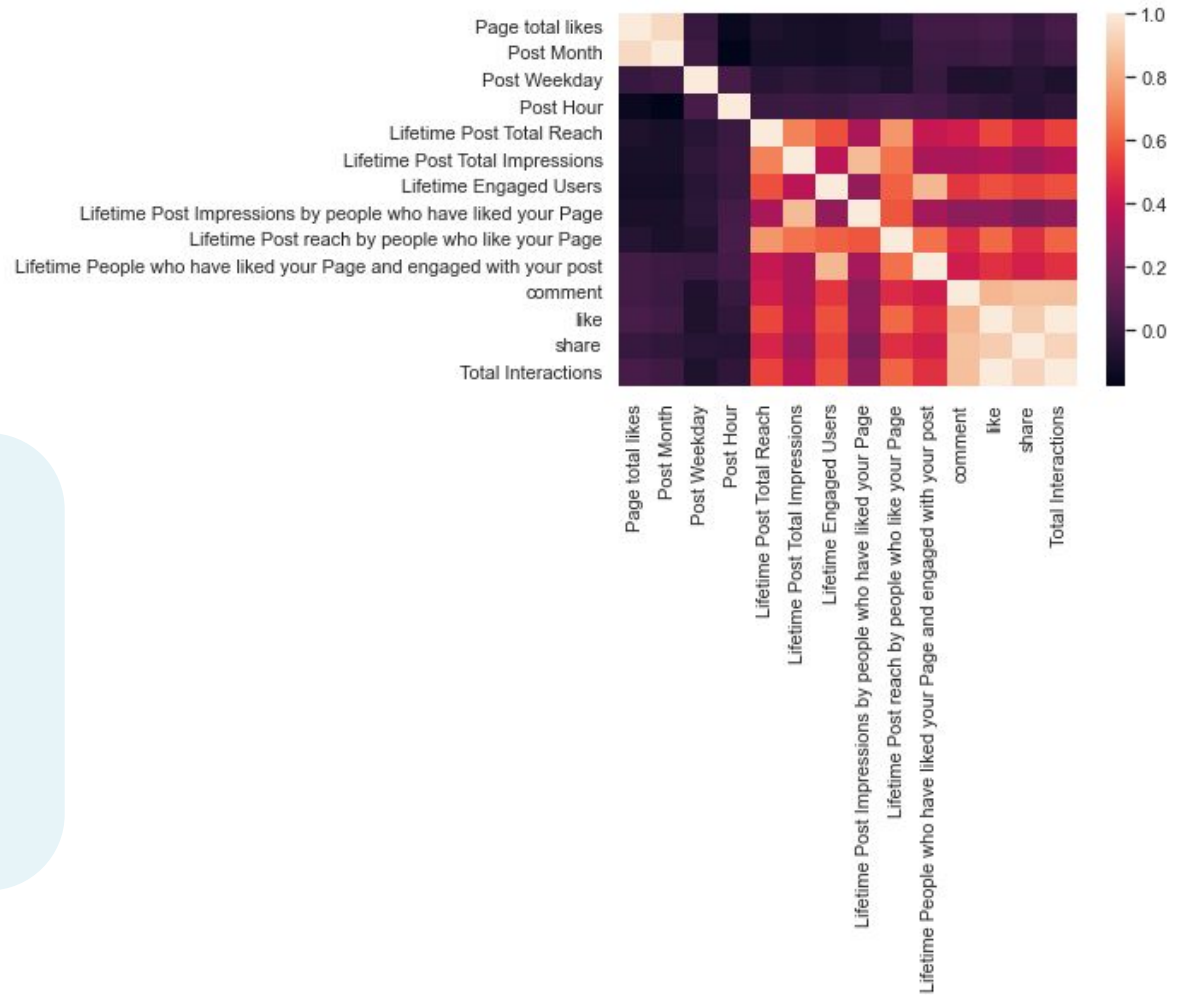
Likes

Trends between likes and engaged users; likes and total reach

3

Strong relationships between

- Strong relationships between
- Comments, likes, shares, total interactions with...
 - Page total likes
 - Post month
 - Post weekday
 - Post hour



Characteristics of Top 5 Liked Posts



Overall engagement is much higher

They are all photos

Three are paid, two are unsolicited

Two were posted around 10am

Average Likes

2,004

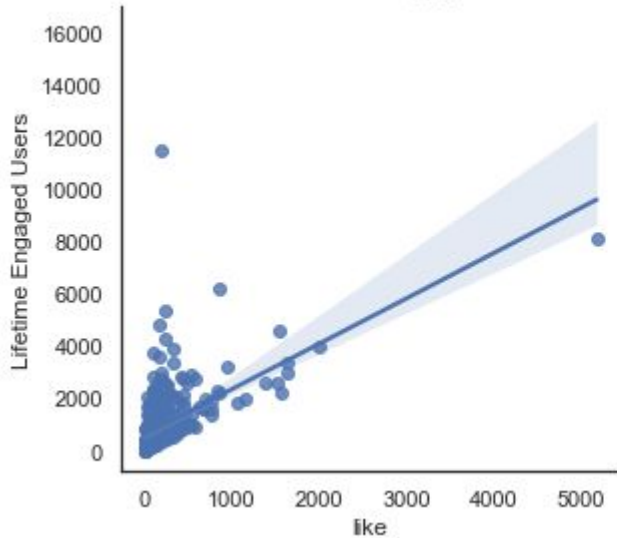
Average Comments

134

Average Shares

279

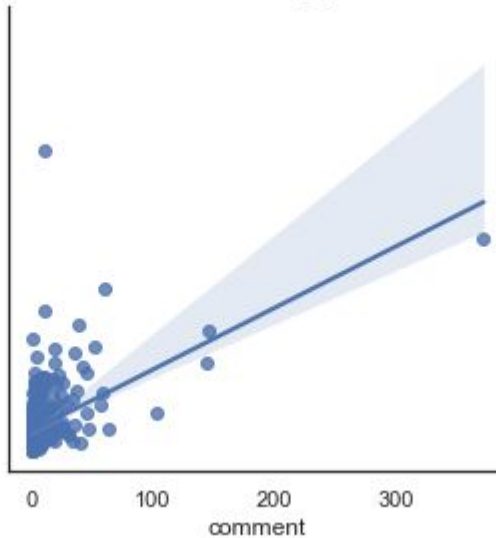
Regression Analysis: Lifetime Engaged Users



Likes

1

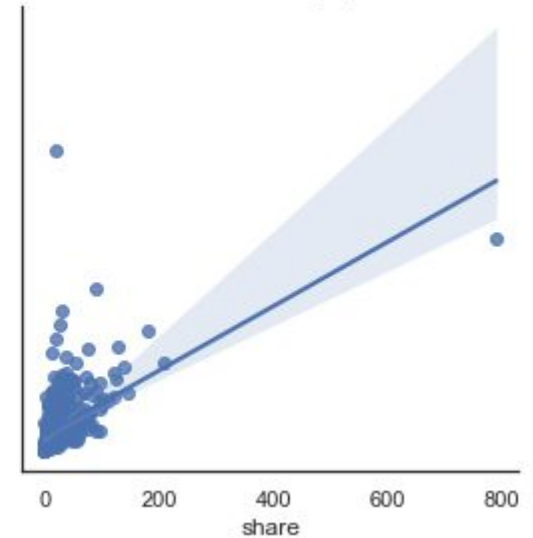
Positive upward slope
- Viral post outlier



Comments

2

Positive upward slope
- Viral post outlier



Shares

3

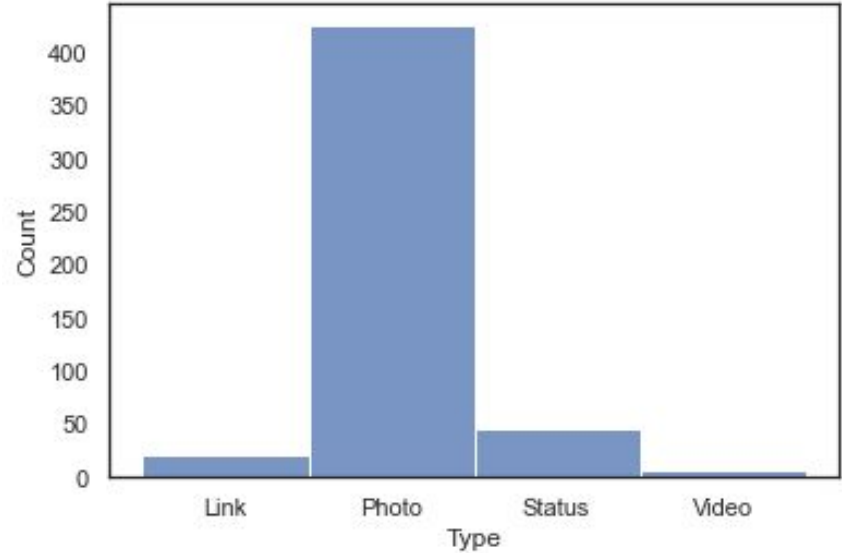
Positive upward slope
- Viral post outlier

Categorical Analysis

Photos

By far the most common media type from this sample

- Where is there room to stand out?



Interactions by Type of Post

Interactions of Paid and Unpaid Media

Link

Lower interaction overall. Paid media has lower interaction, with similar margin of error

Photo

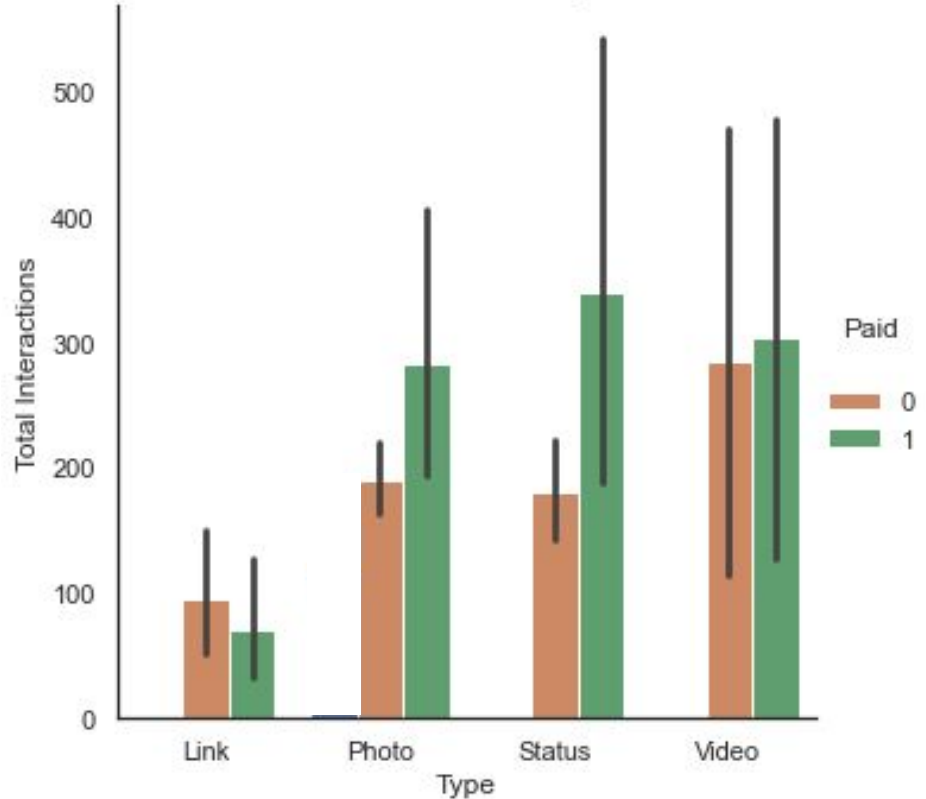
Paid media has significantly higher interaction, but also has higher margin of error

Status

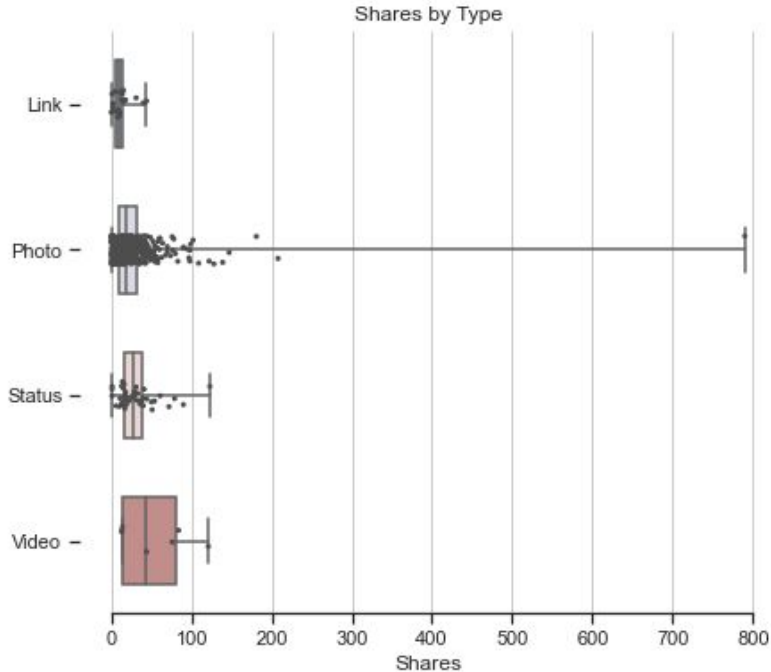
Paid media has much higher interaction, also with a higher margin of error

Video

Almost equal interaction, and similar margin of error



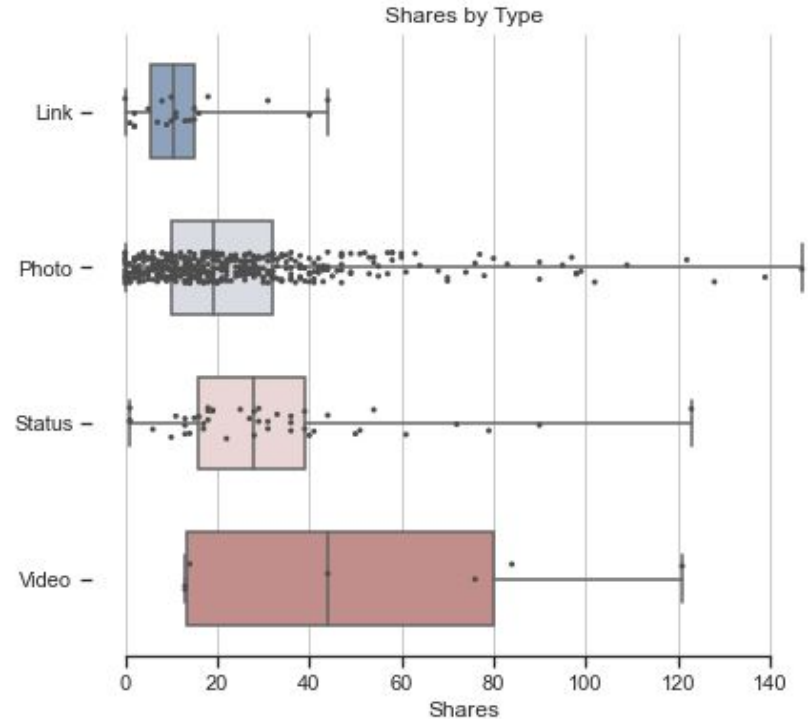
Shares by Type of Post: Unfiltered



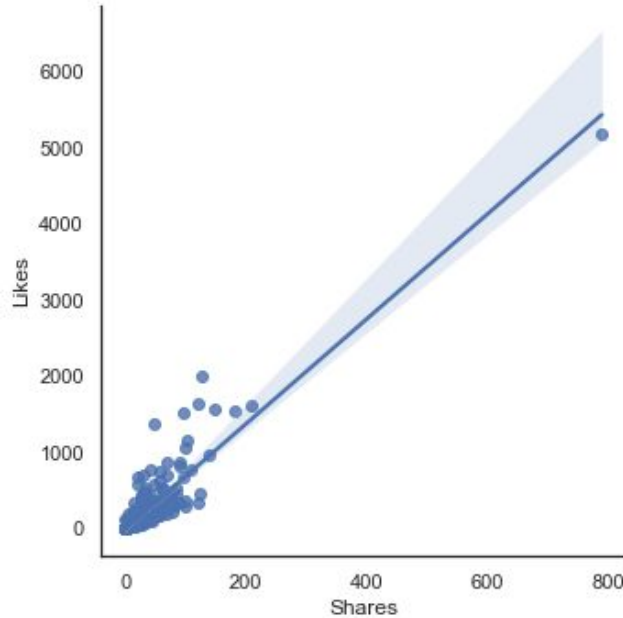
- Most frequent type: photo
 - Then status
- Very high outlier in photos
- Mean is not significantly varied by type
- Video has the highest IQR, but also the least data

Shares by Type of Post: Filtered

- Easier to see data with outliers removed
- Video has the highest mean
 - Followed by status, photo, link
- Photo and status have large 3rd quartiles
- Video has a high IQR



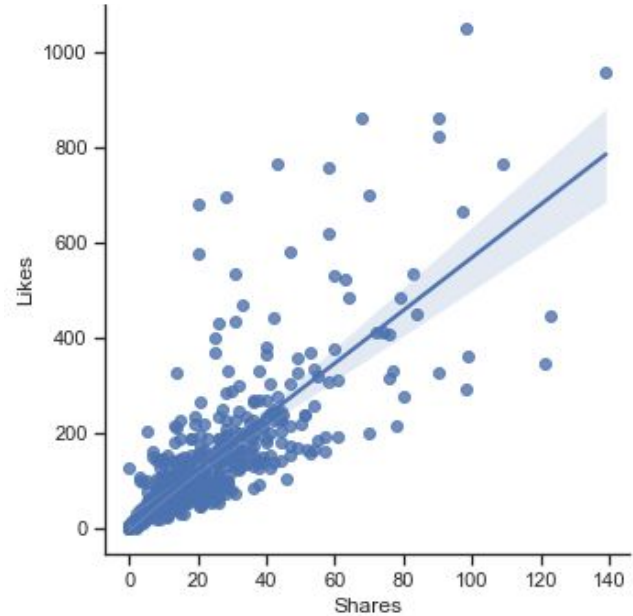
Regression Analysis: Likes and Shares



Unfiltered

Regression showed by shading

- Greater unknown as trend continues up slope



Filtered

About the same trend line present, with outlier removed

- Clear positive linear relationship between likes and shares

How to Successfully Navigate Facebook



01

Post Weekday

Expect Tuesday posts to get the most engagement

02

Paid Posts

Photos and status updates that are paid get more interaction

03

Types

Photos are the most popular, but videos get the most engagement

04

Shares

Focus on increasing shares, as it elevates number of likes

05

Post Month

Consider pushing hard in July, when posts receive the most interaction