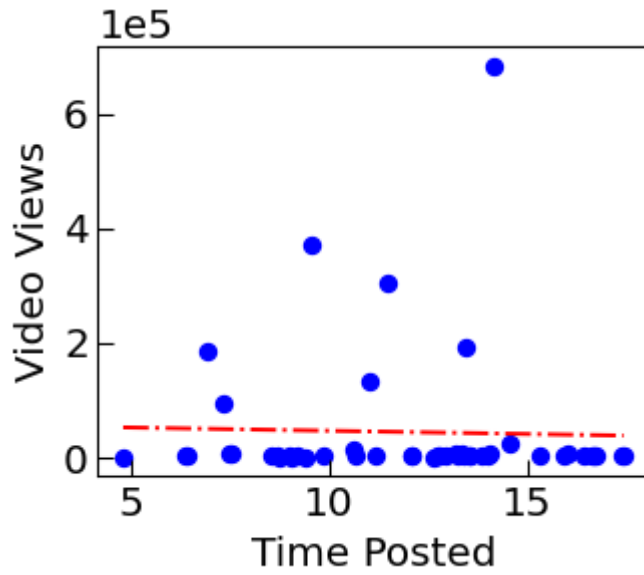*Supplement of*

Exploring TikTok as a promising platform for geoscience communication

Emily E. Zawacki et al.

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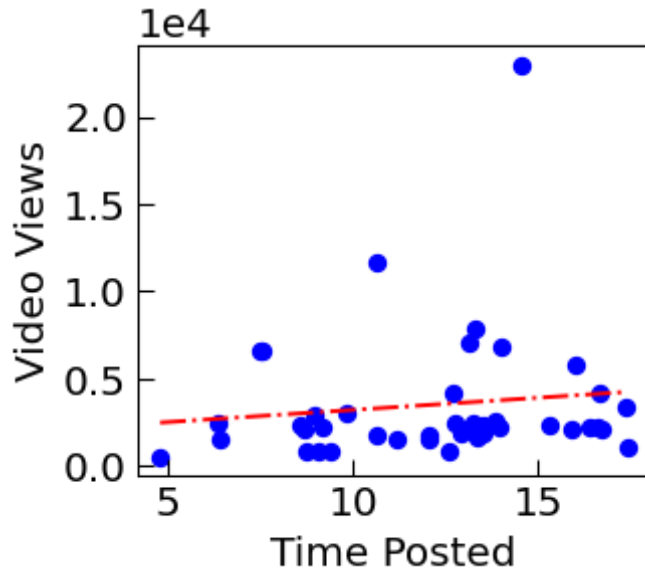
```
R = 0.0302
R^2 = 0.000914
P-value = 0.838
```

S1. Correlation between the number of video views received and the time a video is posted (24-hour time used, posting at Mountain Standard Time (UTC-7)). There is no observed relationship, and the correlation is not statistically significant ($p > 0.05$).

```
R = 0.119
R^2 = 0.0142
P-value = 0.457
```

S2. Correlation between the number of video views received and the time a video is posted (24-hour time used, posting at Mountain Standard Time (UTC-7)), excluding videos with >90,000 views. 24 hour time used. The correlation is not statistically significant (p > 0.05).
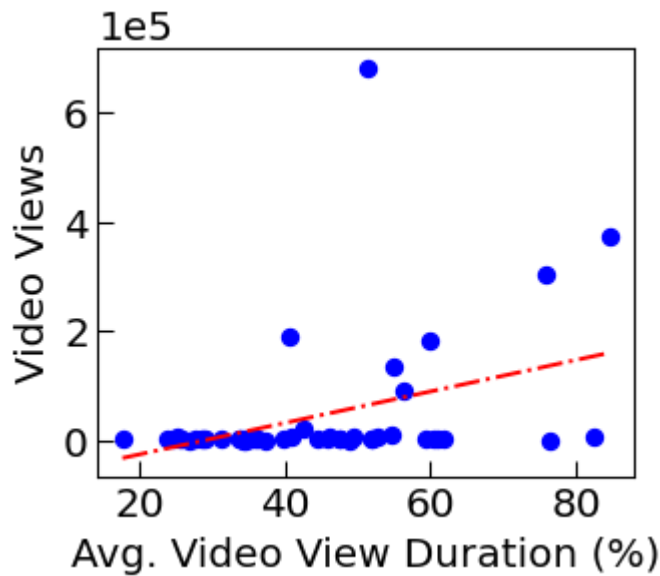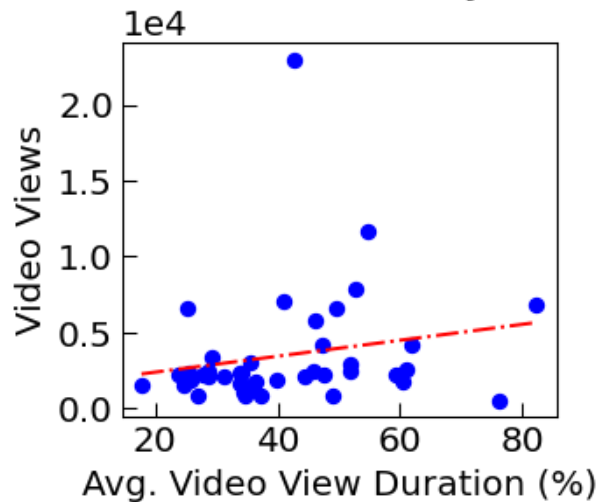
```
R = 0.375
R^2 = 0.141
P-value = 0.00855
```

S3. Correlation between the average video view duration (%) and the number of video views. There is an overall weak positive correlation that is statistically significant.
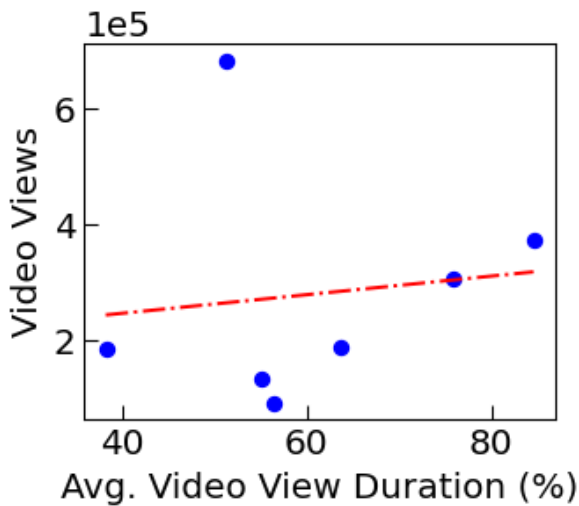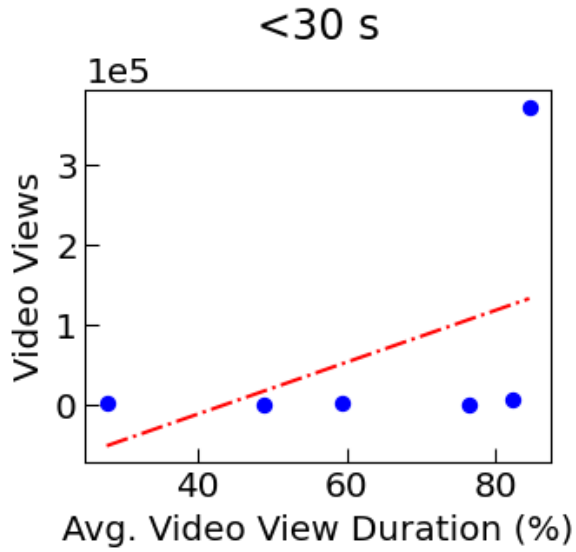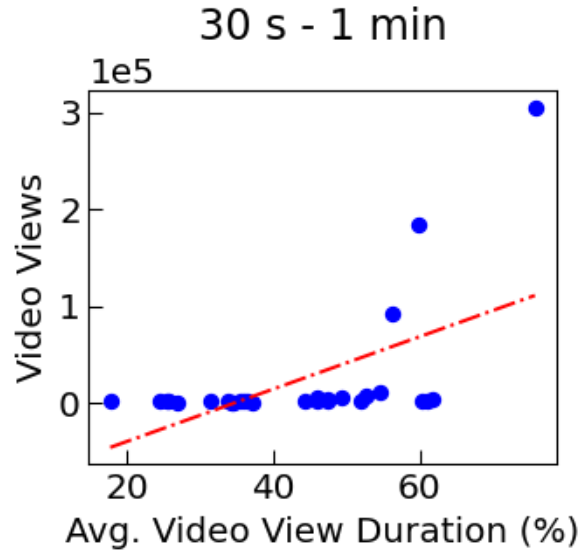


```
R = 0.123
R^2 = 0.0152
P-value = 0.792
```

```
R = 0.195
R^2 = 0.0381
P-value = 0.221
```

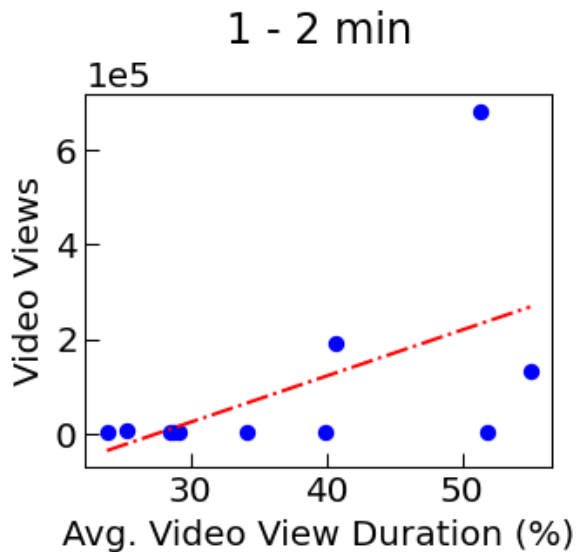**S4.** Correlation between the average video view duration (%) and the number of video views for videos with >90,000 views (left) and <90,000 views (right). Neither correlation is statistically significant ($p > 0.05$).
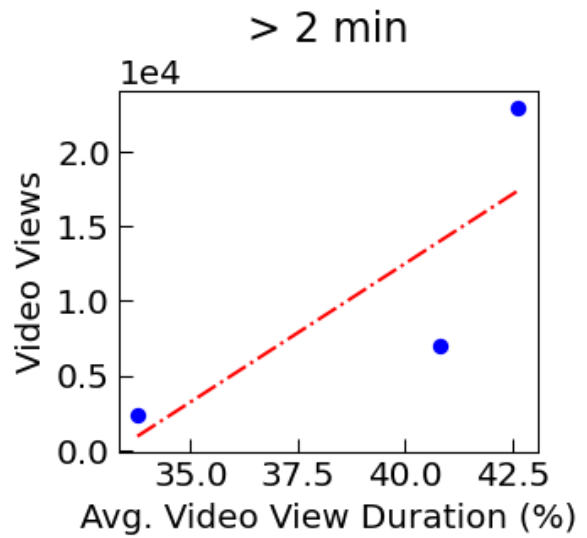
<30 s

R = 0.476
R^2 = 0.226
P-value = 0.340

30 s - 1 min

R = 0.566
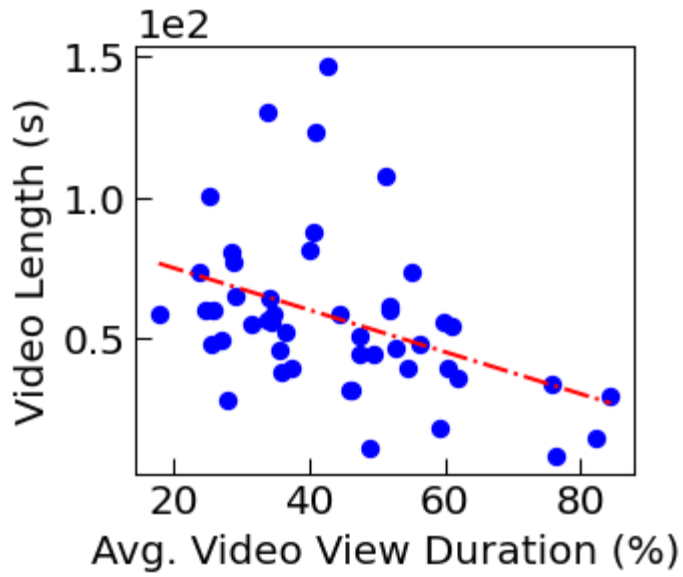R^2 = 0.320
P-value = 0.00169

1 - 2 min

R = 0.539
R^2 = 0.290
P-value = 0.0873

> 2 min

R = 0.805
R^2 = 0.648
P-value is =0.404

S5. Correlation between the number of video views and the average video view duration (%) for videos that are < 30s, 30 s – 1 min, 1 min – 2 min, and > 2 min. Only videos that are 30 s – 1 min in duration show a moderately positive statistically significant correlation.
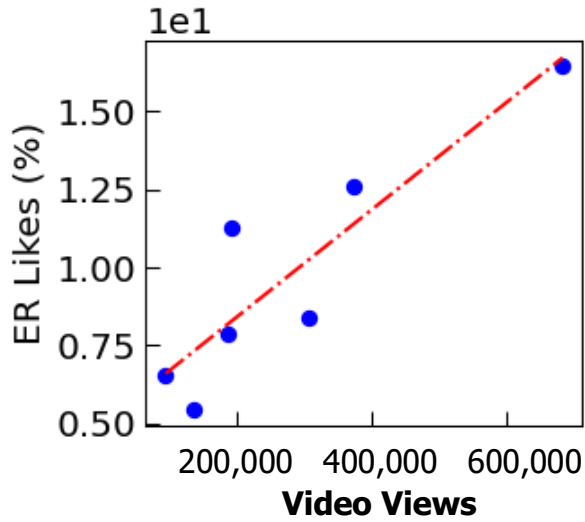
```
R = -0.409
R^2 = 0.168
P-value = 0.00382
```

S6. Correlation between the average video view duration (%) and the length of a video (s). There is a statistically significant negative correlation.
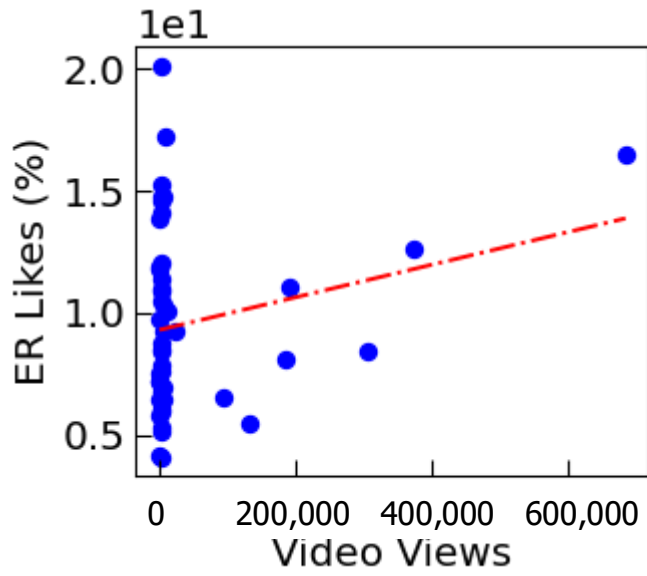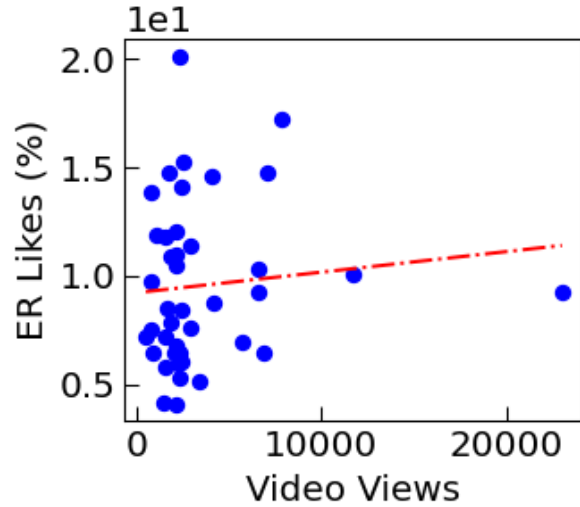
```
R = 0.220
R^2 = 0.0485
P-value = 0.133
```

S7. Correlation between the number of video views and the engagement rate of likes for a video. The correlation is not statistically significant (p > 0.05).

R = 0.898
R^2 = 0.806
P-value = 0.00607

R = 0.0986
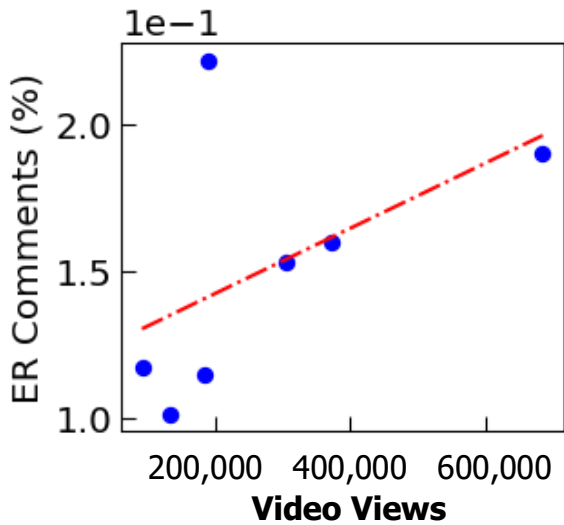R^2 = 0.00973
P-value = 0.539

S8. Correlation between the number of video views and the engagement rate of likes for a video with >90,000 views (left) and <90,000 views (right). There is a strong positive correlation that is statistically significant between video views and the engagement rate of likes for videos with >90,000 views. There is no statistically significant correlation for videos with <90,000 views.
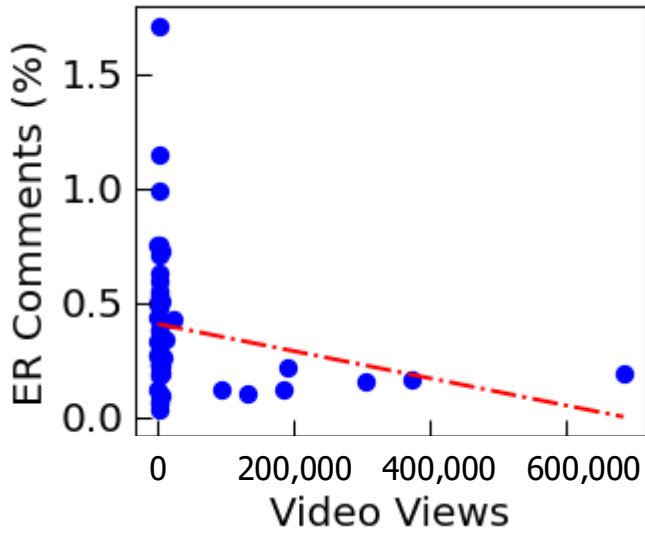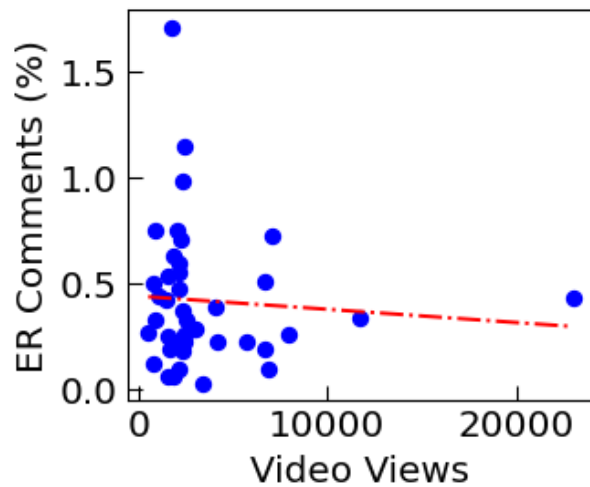
```
R = 0.231
R^2 = 0.0534
P-value = 0.114
```

S9. Correlation between the number of video views and the engagement rate of comments. The correlation is not statistically significant (p > 0.05).
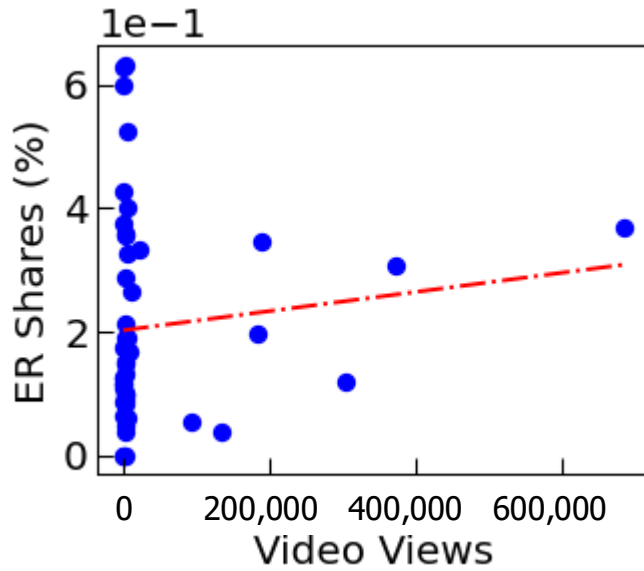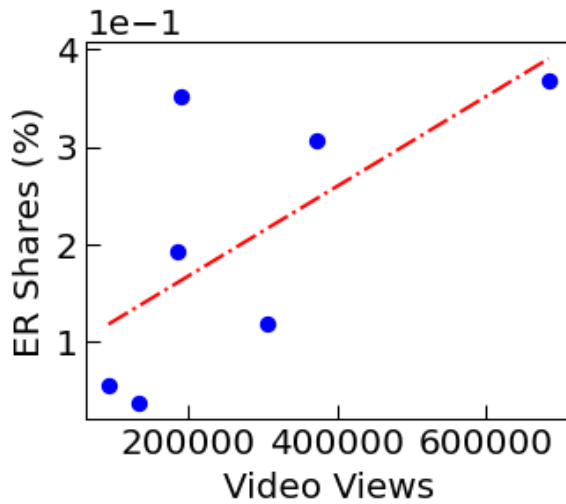


```
R = 0.514
R^2 = 0.264
P-value = 0.238
```

```
R = 0.0751
R^2 = 0.00564
P-value = 0.641
```

S10. Correlation between the number of video views and the engagement rate of comments for videos with >90,000 views (left) and videos with <90,000 views. The correlation is not statistically significant (p > 0.05).
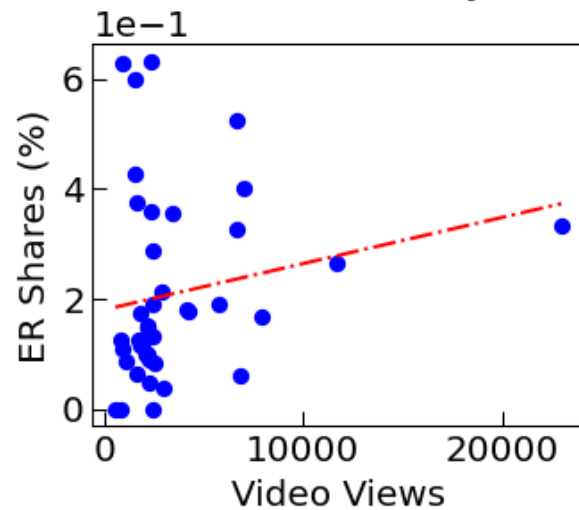
```
R = 0.115
R^2 = 0.0132
P-value = 0.434
```

S11. Correlation between the number of video views and the engagement rate of shares. The correlation is not statistically significant (p > 0.05).
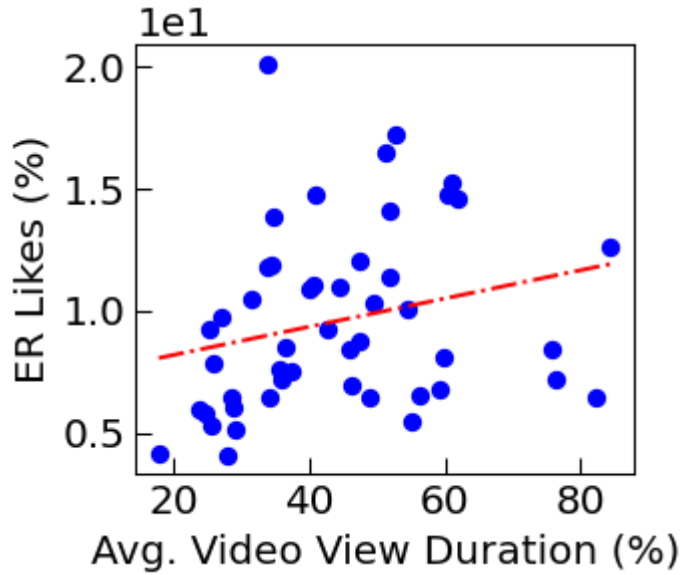


```
R = 0.670
R^2 = 0.449
P-value = 0.0994
```

```
R = 0.191
R^2 = 0.0364
P-value = 0.232
```

S12. Correlation between the number of video views and the engagement rate of shares for videos with >90,000 views (left) and <90,000 views (right). The correlation is not statistically significant (p > 0.05).
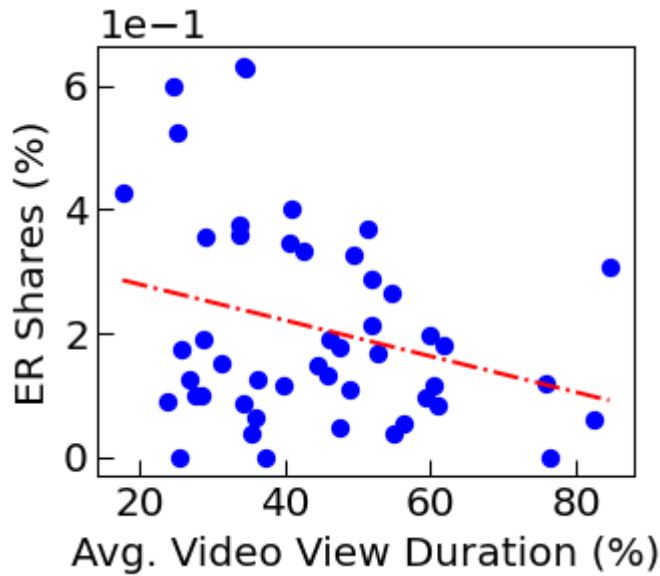
```
R = 0.247
R^2 = 0.0611
P-value = 0.0902
```

S13. Correlation between the average video view duration (%) and the engagement rate of likes. The correlation is not statistically significant (p > 0.05).
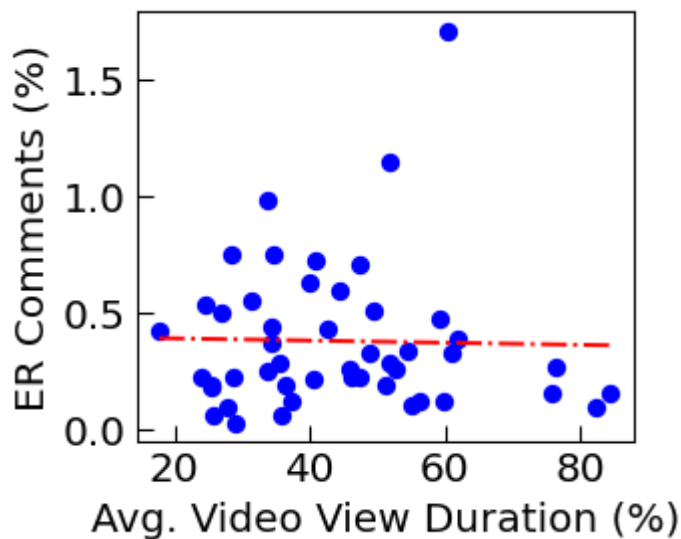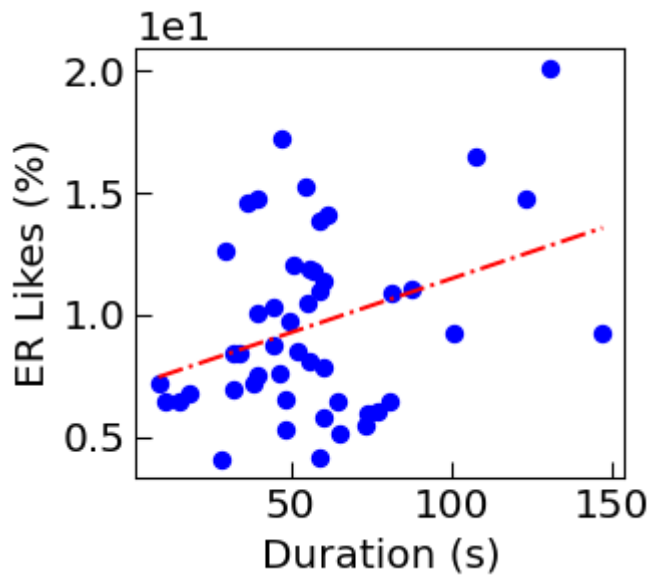


```
R = 0.0233
R^2 = 0.000545
P-value = 0.875
```

S14. Correlation between the average video view duration (%) and the engagement rate of comments. The correlation is not statistically significant (p > 0.05).
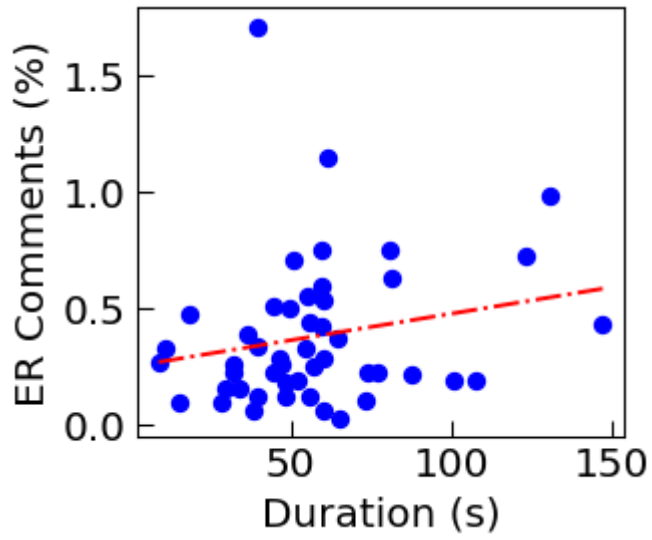
```
R = 0.280
R^2 = 0.0785
P-value = 0.0538
```

S15. Correlation between the average video view duration (%) and the engagement rate of shares. The correlation is not statistically significant (p > 0.05).


```
R = 0.344
R^2 = 0.118
P-value = 0.0170
```
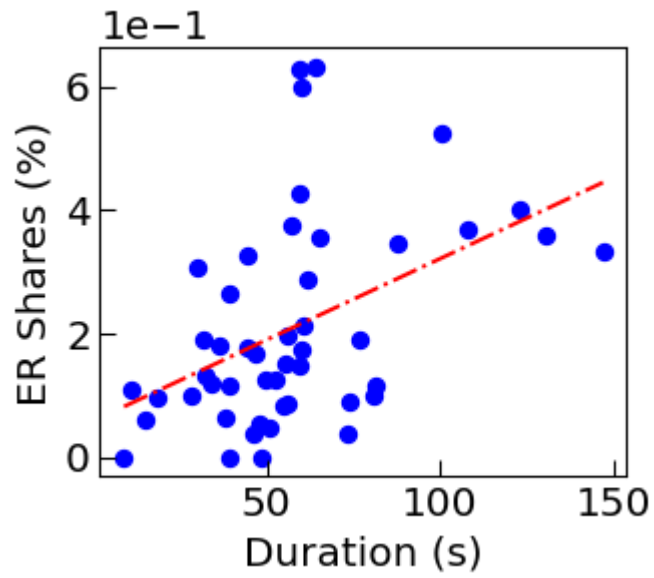
S16. Correlation between the engagement rate of likes (%) and the duration of a video (s). There is a weak positive correlation that is statistically significant (p < 0.05).

```
R = 0.209
R^2 = 0.0437
P-value = 0.154
```

S17. Correlation between the engagement rate of comments (%) and the duration of a video (s). The correlation is not statistically significant ($p > 0.05$).

```
R = 0.457
R^2 = 0.209
P-value = 0.00108
```

S18. Correlation between the engagement rate of shares (%) and the duration of a video (s). There is a weak to moderate positive relationship that is statistically significant ($p < 0.05$).

GMVs
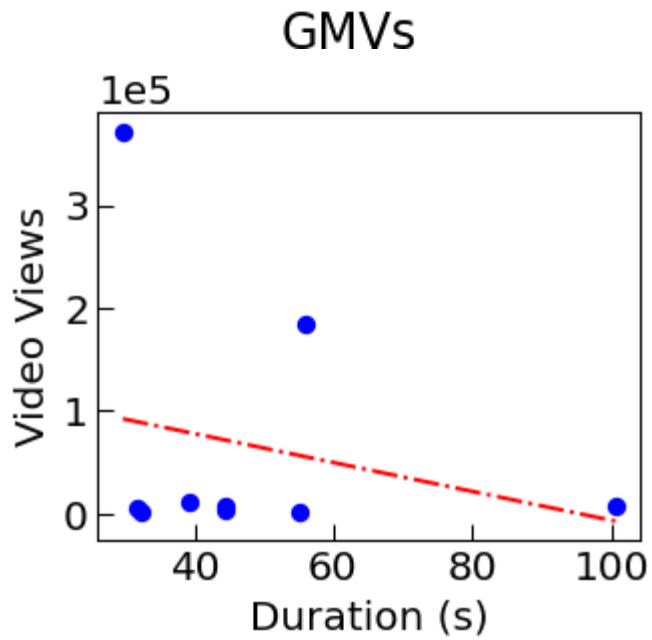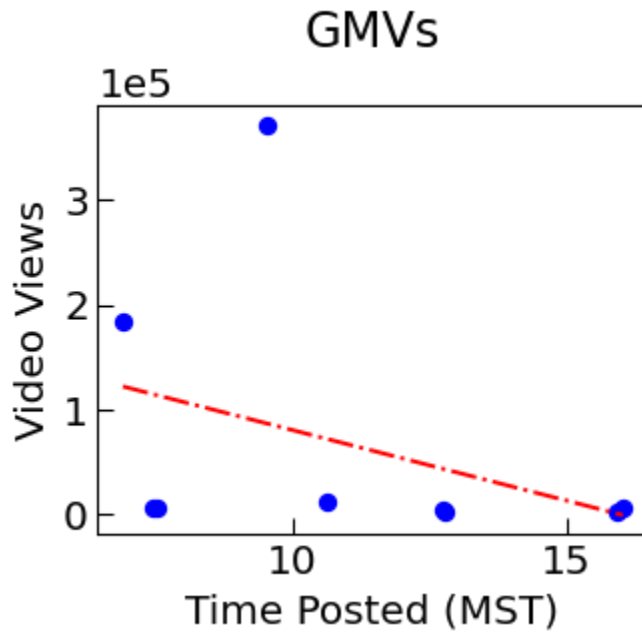
```
R = -0.238
R^2 = 0.0567
P-value = 0.537
```

S19. GMV videos: Correlation between the video length/duration and the number of video views for the GMV videos. There is no statistically significant correlation.

GMVs
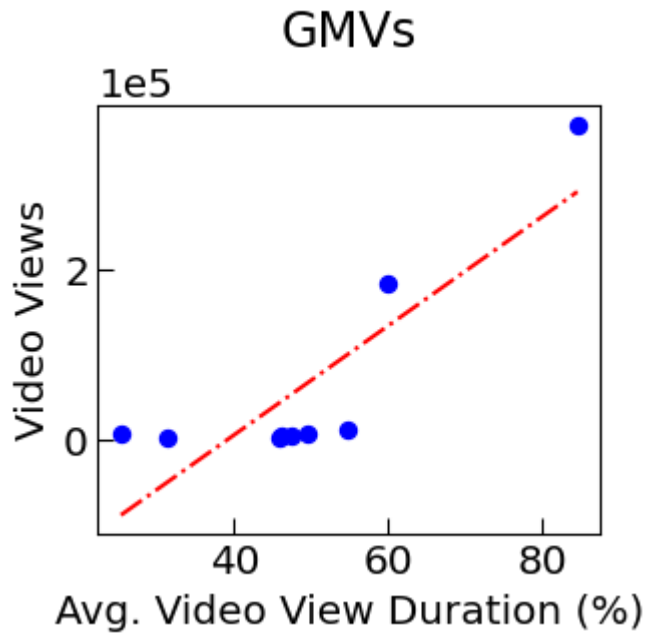
```
R = 0.847
R^2 = 0.717
P-value = 0.00398
```
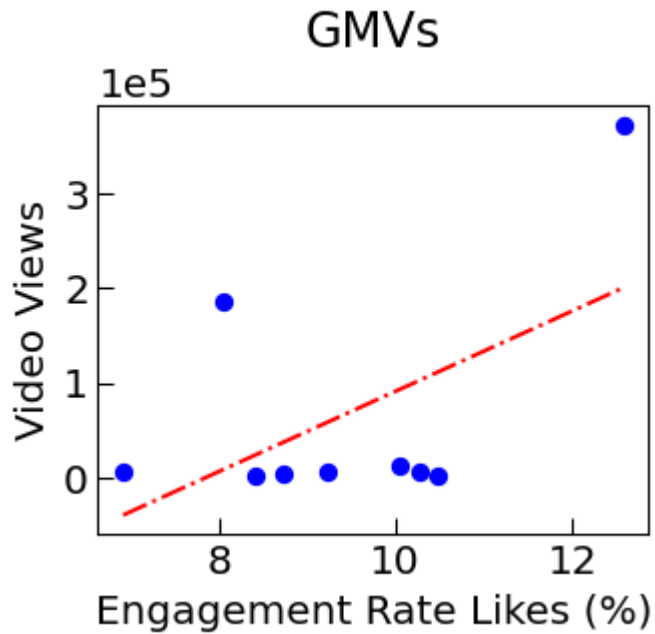
S20. Correlation between the video view duration and the number of video views for the GMV videos. There is a strong positive correlation that is statistically significant.

GMVs

```
R = -0.36708096023244136
R^2 = 0.134748431365171
P-value =0.312
```

S21. Correlation between the time a video was posted (24 hour time, Mountain Standard Time MST) and the number of video views for the GMV videos. There is a weak negative correlation that is not statistically significant.
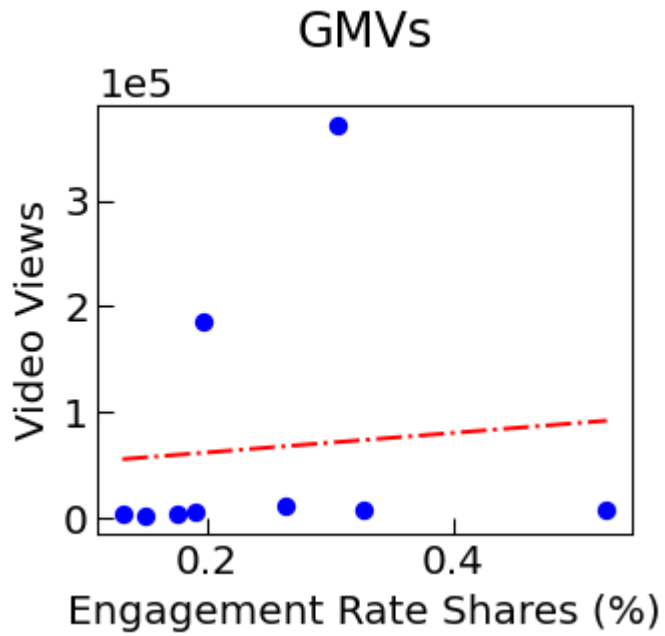
GMVs

```
R = .5411468509829077
R^2 = 0.2928399143287176
P-value = 0.132
```

S22. Correlation between the engagement rate of likes and the number of video views for the GMV videos. There is a moderately positive relationship that is not statistically significant.

GMVs
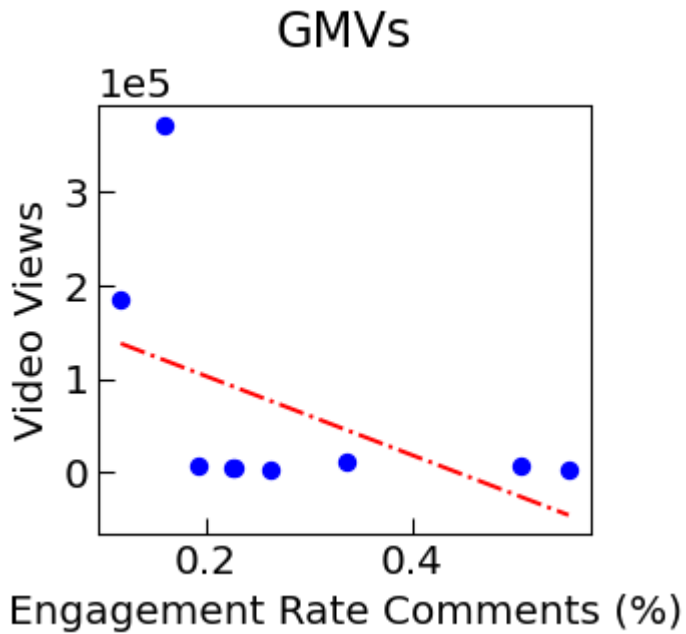
R = -0.495
R^2 = 0.245
P-value = 0.176

S23. Correlation between the engagement rate of comments and the number of video views for the GMV videos. There is a weak negative relationship that is not statistically significant.

GMVs

R = 0.0880
R^2 = 0.00775
P-value = 0.822

S24. Correlation between the engagement rate of shares and the number of video views for the GMV videos. There is a no statistically significant correlation.