Online Engagement on TED Talk Videos

Nikhil Nandigam and Jesse Velasquez

IMT 574, UW Information School

(Davidson, 2018)

THE DATA

TED Main Dataset (2550r x 17f):

- name
- title
- description
- main_speaker
- speaker_occupation
- num_speaker
- duration (s)
- event
- film_date
- published_date
- comments
- tags
- languages
- ratings
- related_talks
- url
- views

*TED Transcript Dataset (2467r x 2f):*

- url
- transcript

QUESTIONS TO EXPLORE

"In general terms, video engagement is considered the primary factor that determines how much information viewers will retain from the videos they watch" (Iserovitch, 2021)

TED: "Our agenda is to make great ideas accessible and spark conversation" (TED, n. d.)

1. Do the number of views correlate to engagement?

2. How can we use video attributes to predict engagement?

3. What attributes result in high audience engagement?

DO VIEWS TRANSLATE TO COMMENTS?

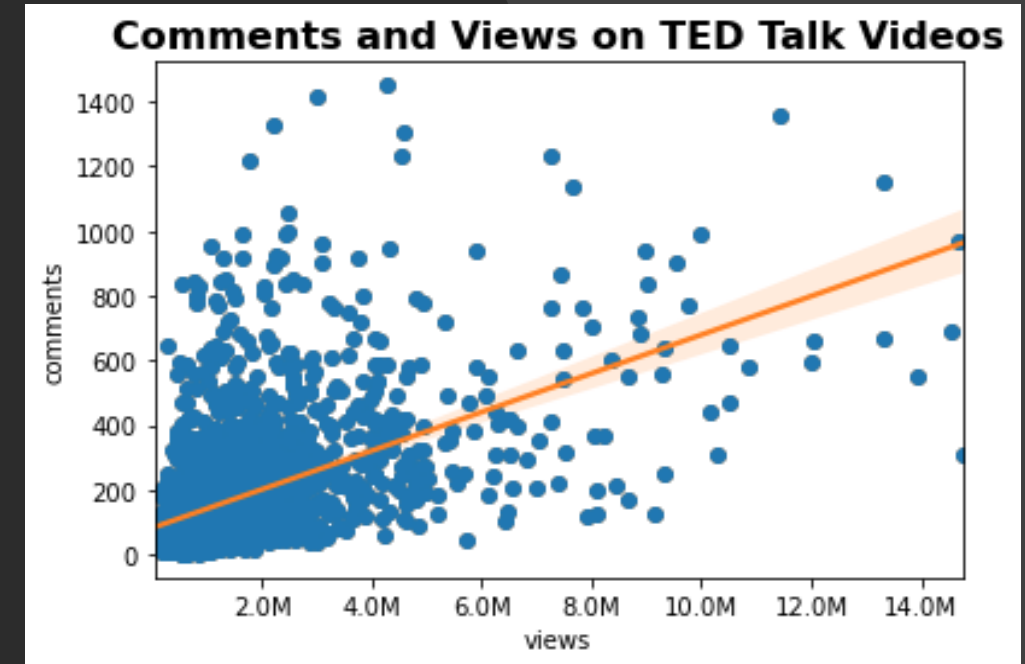Filter top 30 outliers
views <= to 15M
comments <= 1500
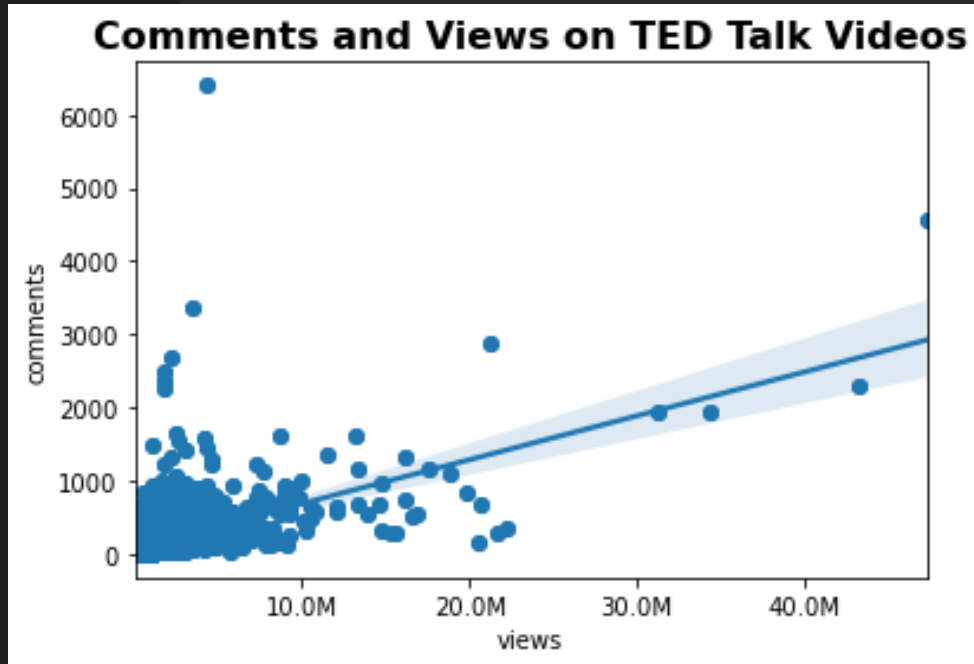
Linear equation:
comments = 0.00007688(views)
No interpretable constant for this context
R-squared = 0.461
With additional predictors, R-squared = 0.535

Linear equation:
comments = 0.0000854(views)
No interpretable constant for this context
R-squared = 0.566
With additional predictors, R-squared = 0.65

HOW CAN WE USE VIDEO ATTRIBUTES TO PREDICT ENGAGEMENT?

Example: 4 engagement classes

| Class 1 | Class 2 | Class 3 | Class 4 |

0   0.5 *   Max(Engagement)
           Max(Engagement)
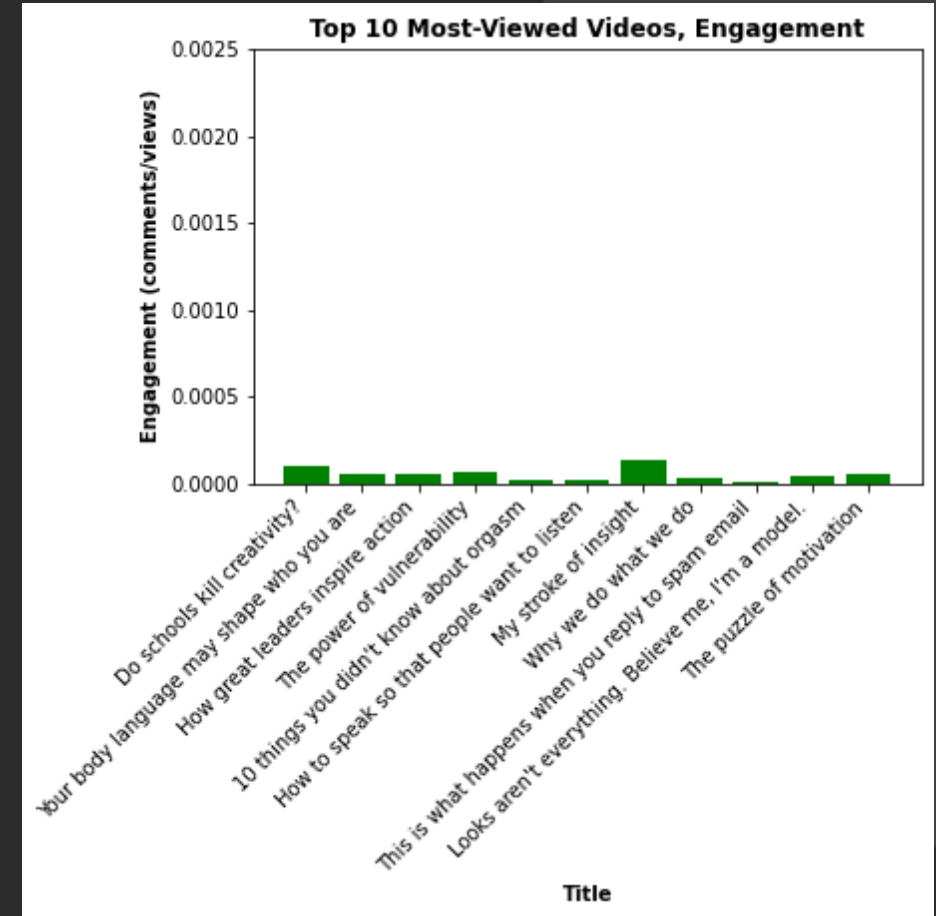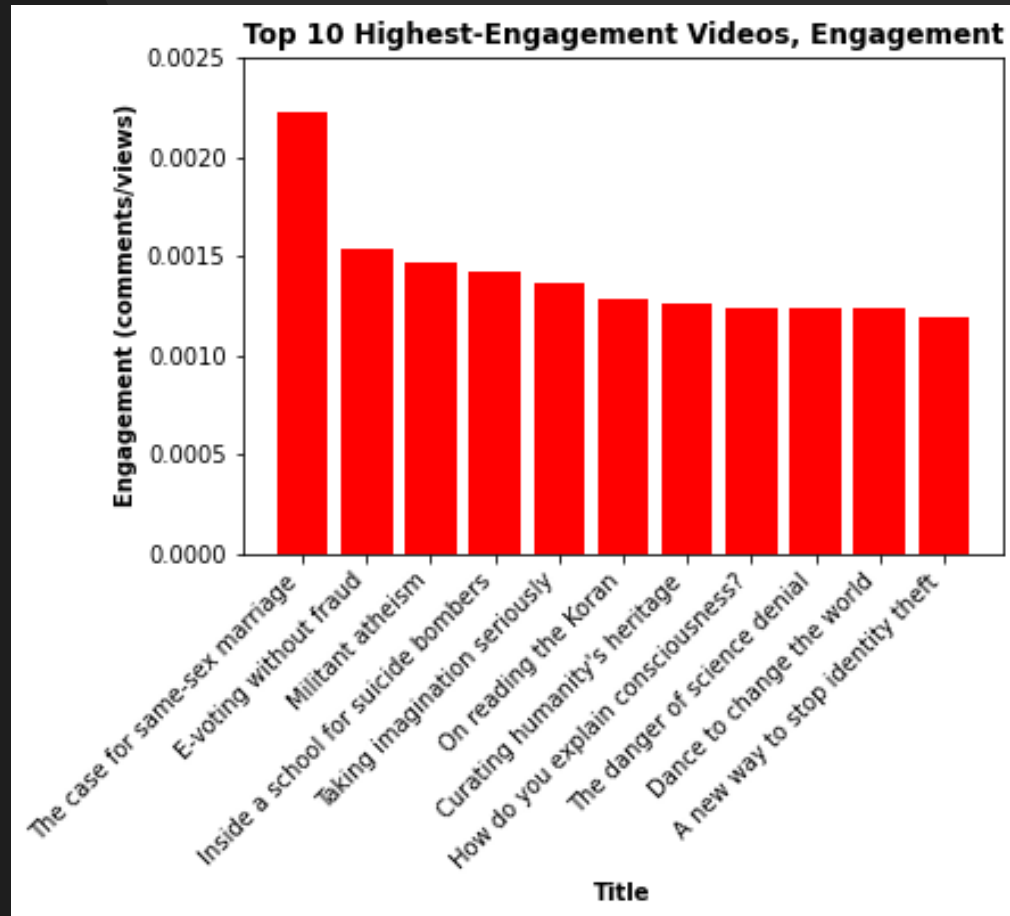
Engagement = Comments / Views

- Calculated engagement for each video

- Provided engagement class label for each video based on bin placement

- Using Naïve Bayes:
  - 5 classes
  - Tags, Title, Description over 10 models
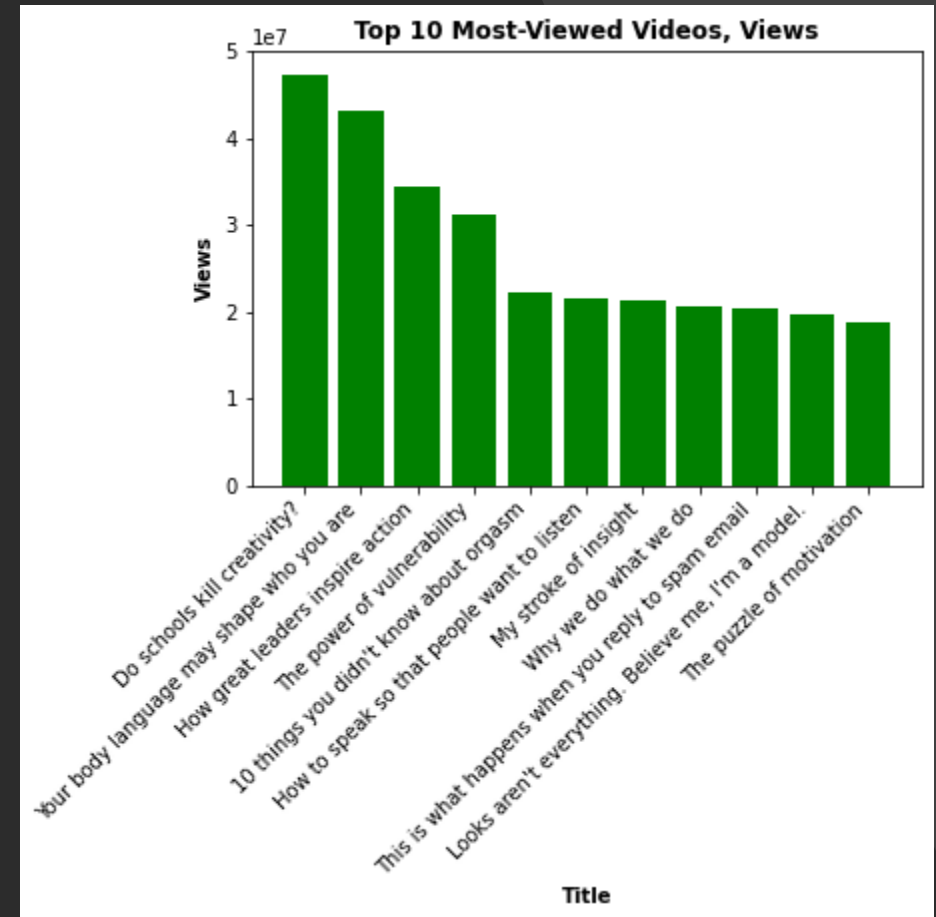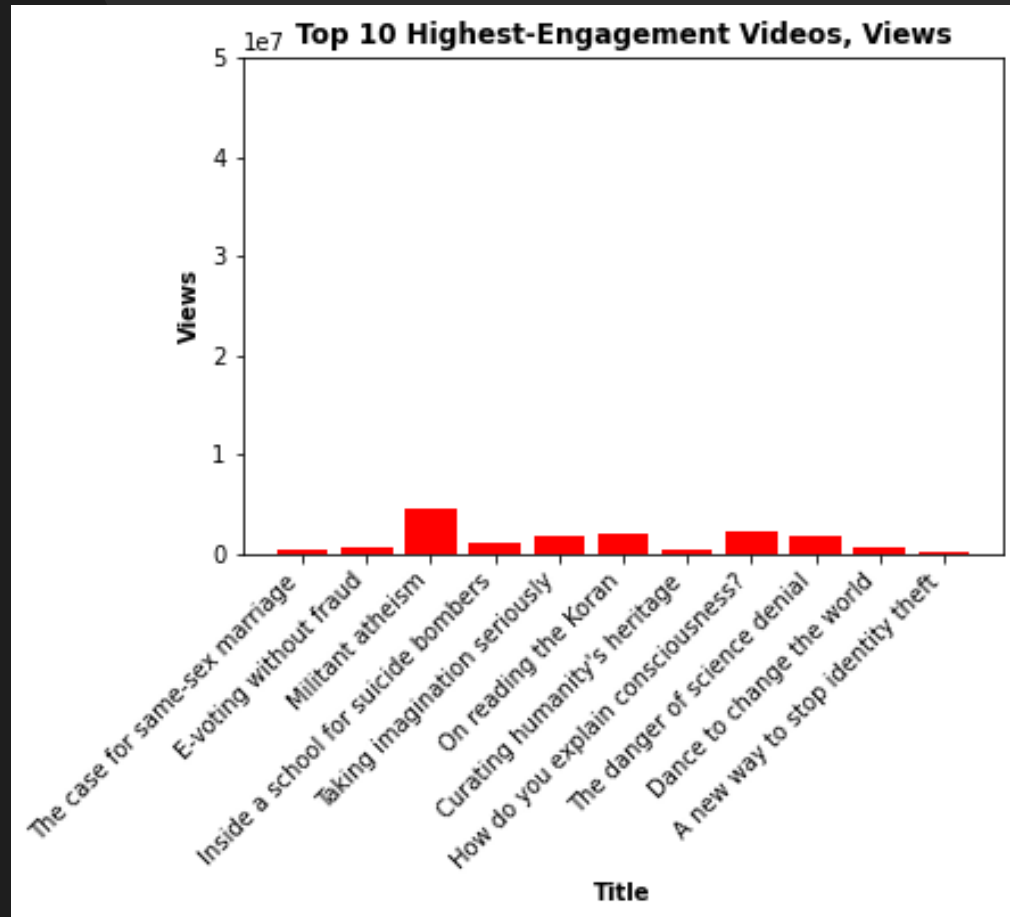 - Transcript over 3 models
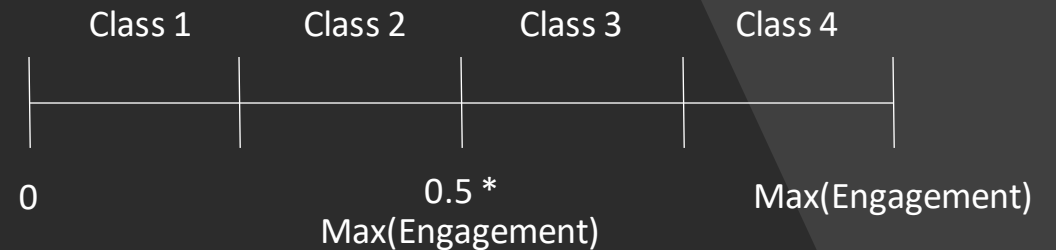
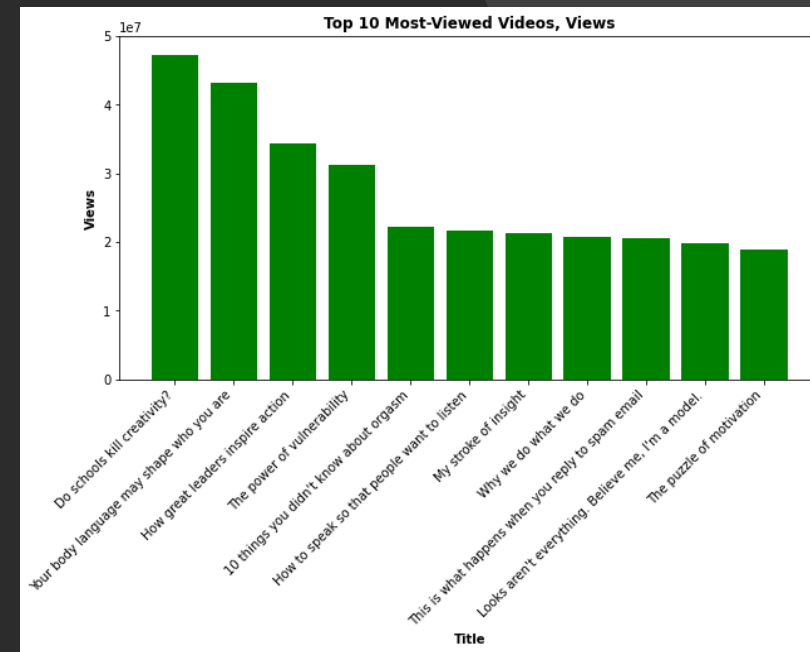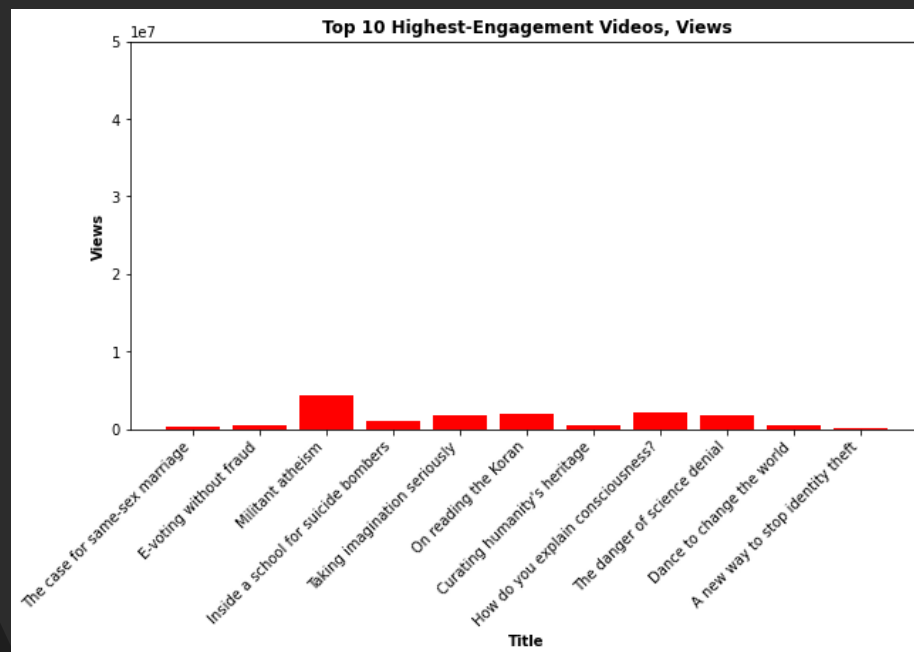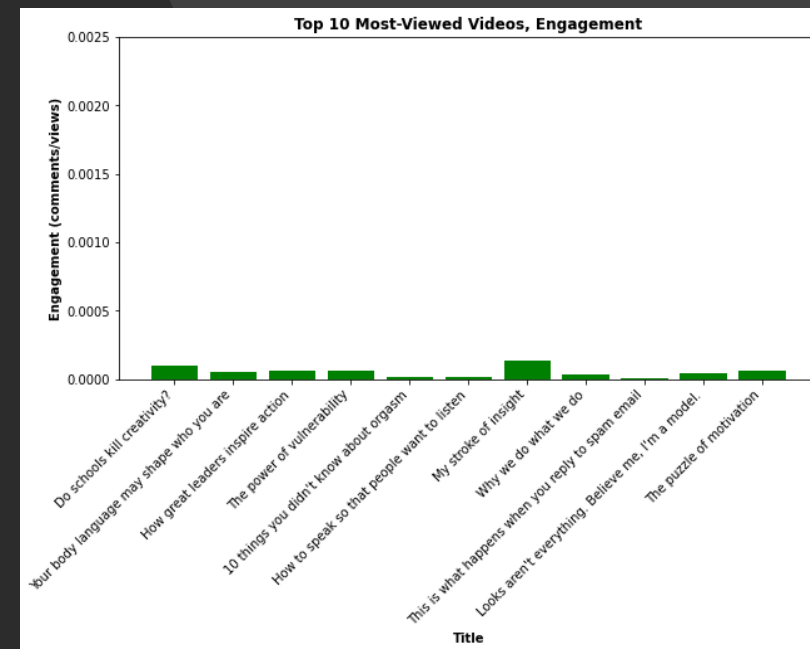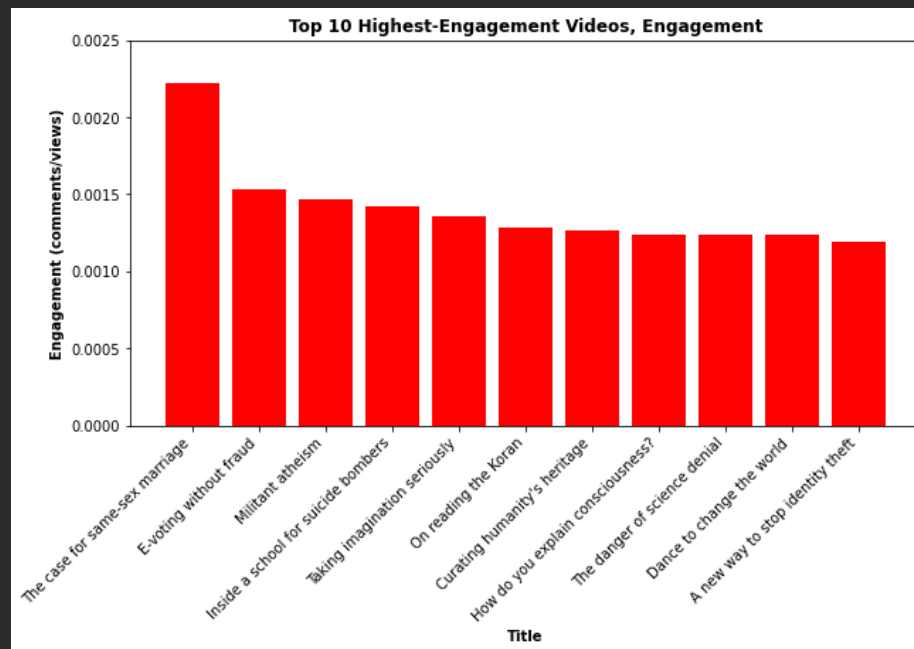| PREDICTOR	AVERAGE ACCURACY	PROCESSING TIME (seconds)
Tags	0.873	0.435
Title	0.914	0.371
Description	0.911	1.110
Transcript	0.915	28.063

WHAT ATTRIBUTES RESULT IN HIGH AUDIENCE ENGAGEMENT?

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RECOMMENDATIONS TO CONTENT CREATORS

- **Views are important to generate engagement, but they do not represent the entire picture.**

- **Instead of fussing over viewer or subscriber metrics, consider other subject-matter optimization techniques.**

- **Engage emotions to drive engagement.**

Employ demographic data analytics, SEO tools to drive viewers to content

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Dedicate focus toward subject-matter (titles, topics, core content)

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Assess timeliness/debate around topics to maximize emotional engagement

ETHICAL ISSUES & SOCIAL IMPACT

- Externalities of purposefully amplifying the dissemination and engagement of online content
  - Unlike TED talks, most social media platforms do not curate ALL content
- Vetted, authoritative content sacrificed for algorithm prioritizing content with incendiary keywords
  - Reinforcing corporate, political, or other powerful interests
  - Financial incentive to promote possible misinformation or celebrity content
- Do online media platforms represent a private corporate entities or do they serve as public utilities requiring government oversight and regulation?
- What role does the IT community play to ensure society is literate in the impact of these technologies?

REFERENCES

Davidson, J. D. (December 17, 2018). *Quiz: Which TED talk are you?* TED. https://ideas.ted.com/quiz-which-ted-talk-are-you/

Iserovitch, T. (January 8, 2021). What is Video Engagement and how to Measure it. *Cincopa*. https://www.cincopa.com/blog/what-is-video-engagement-and-how-to-measure-it/

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