Predict popularity of TED video

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1. Motivation

- We are TED people.
  - Did another project for ‘working with open data’ (WWOD) class dealing with comparison between TED and TEDx (http://nbviewer.ipython.org/5439852)

- Reflected feedbacks from the WWOD project
  - including social media data
  - predicting the popularity with various attributes of video.

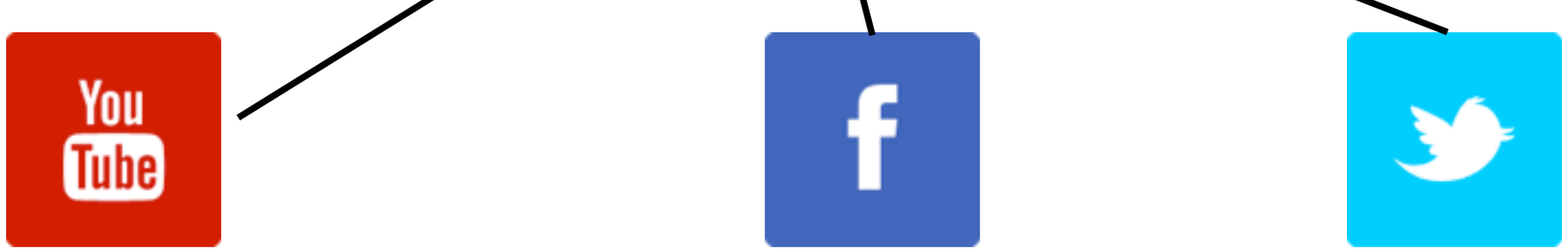
What factors will drive the view counts of the TED YouTube videos?

2. Dataset

TED
Ideas worth spreading

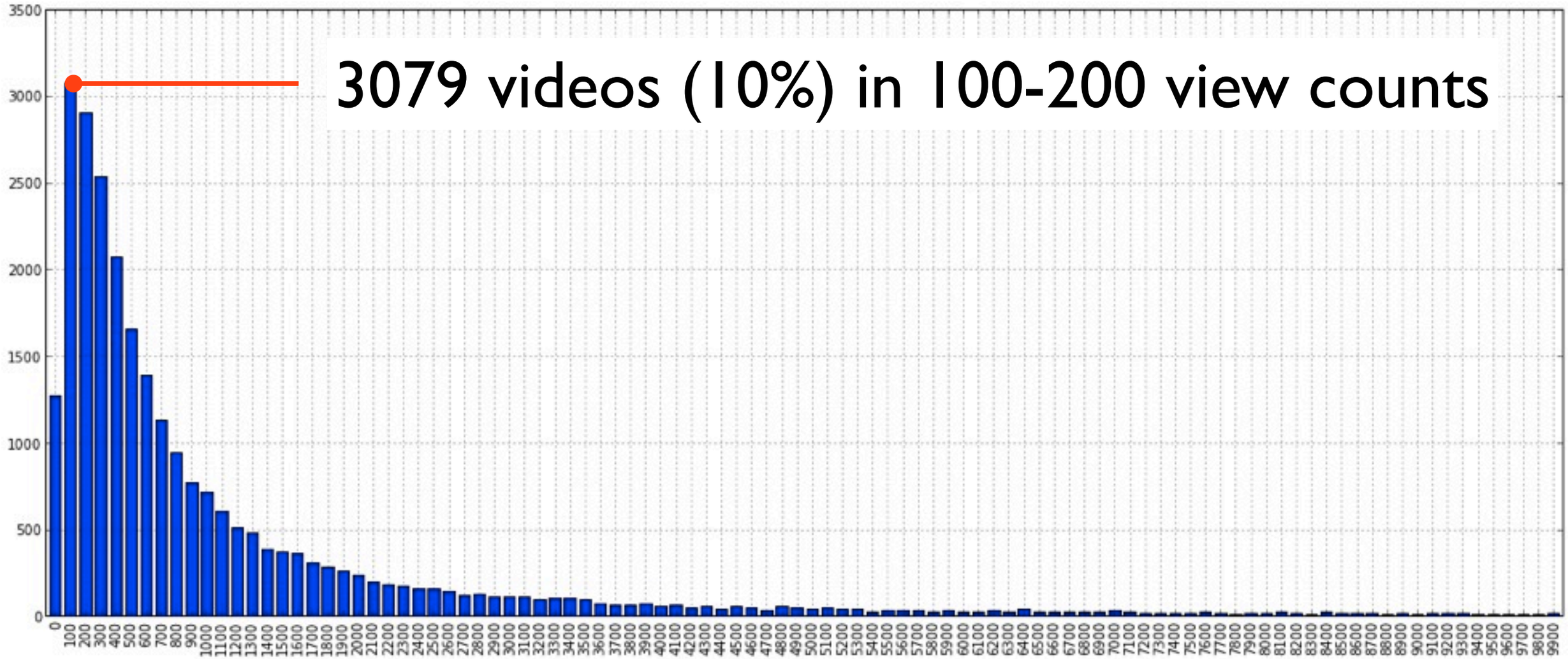
TEDx
x = independently organized TED event

# of Videos	1,371	27,581	=	28,952



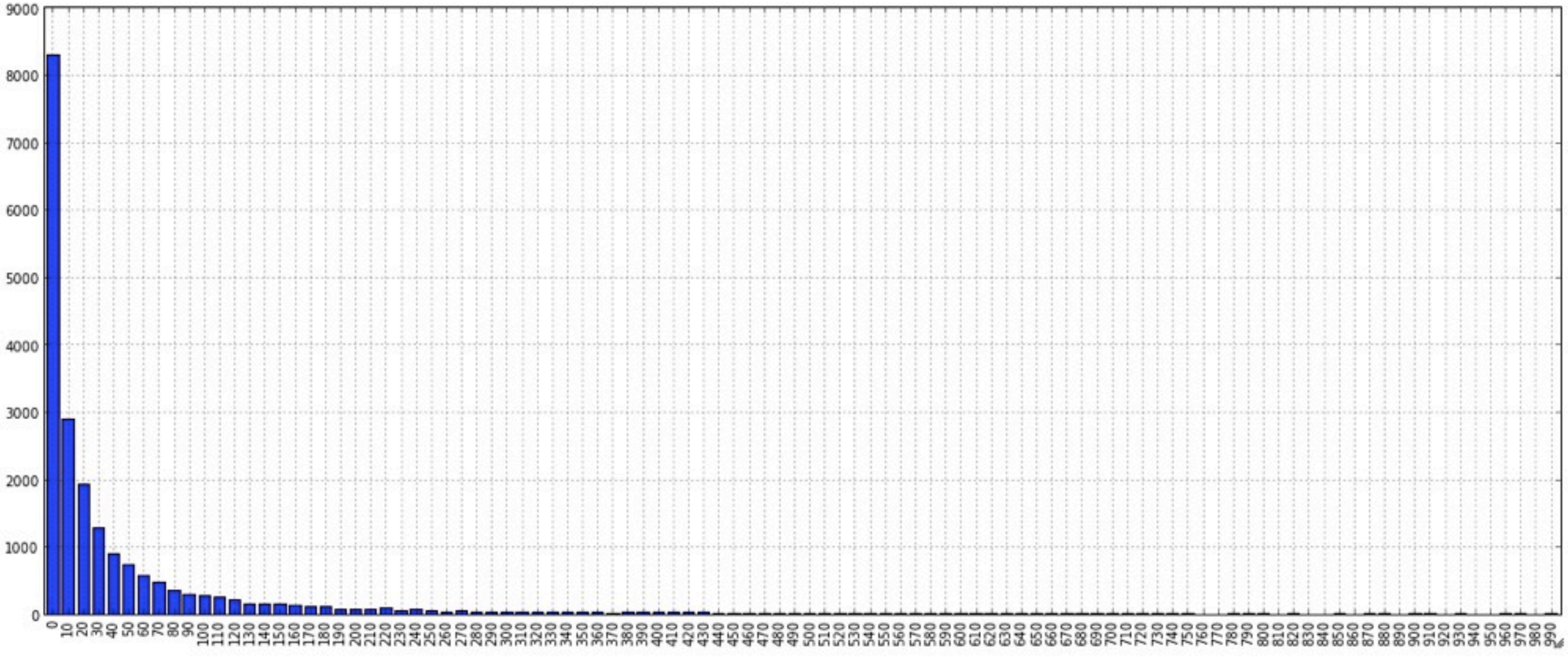
viewCount likeCount ratingCount favoriteCount commentCount	category tags duration title description event	click_count comment_count commentsbox_count like_count share_count total_count	count

2. Dataset (details)



2. Dataset (details)

of Videos



Facebook Like Counts

more info: http://nbviewer.ipython.org/5602564

2. Dataset (challenges)

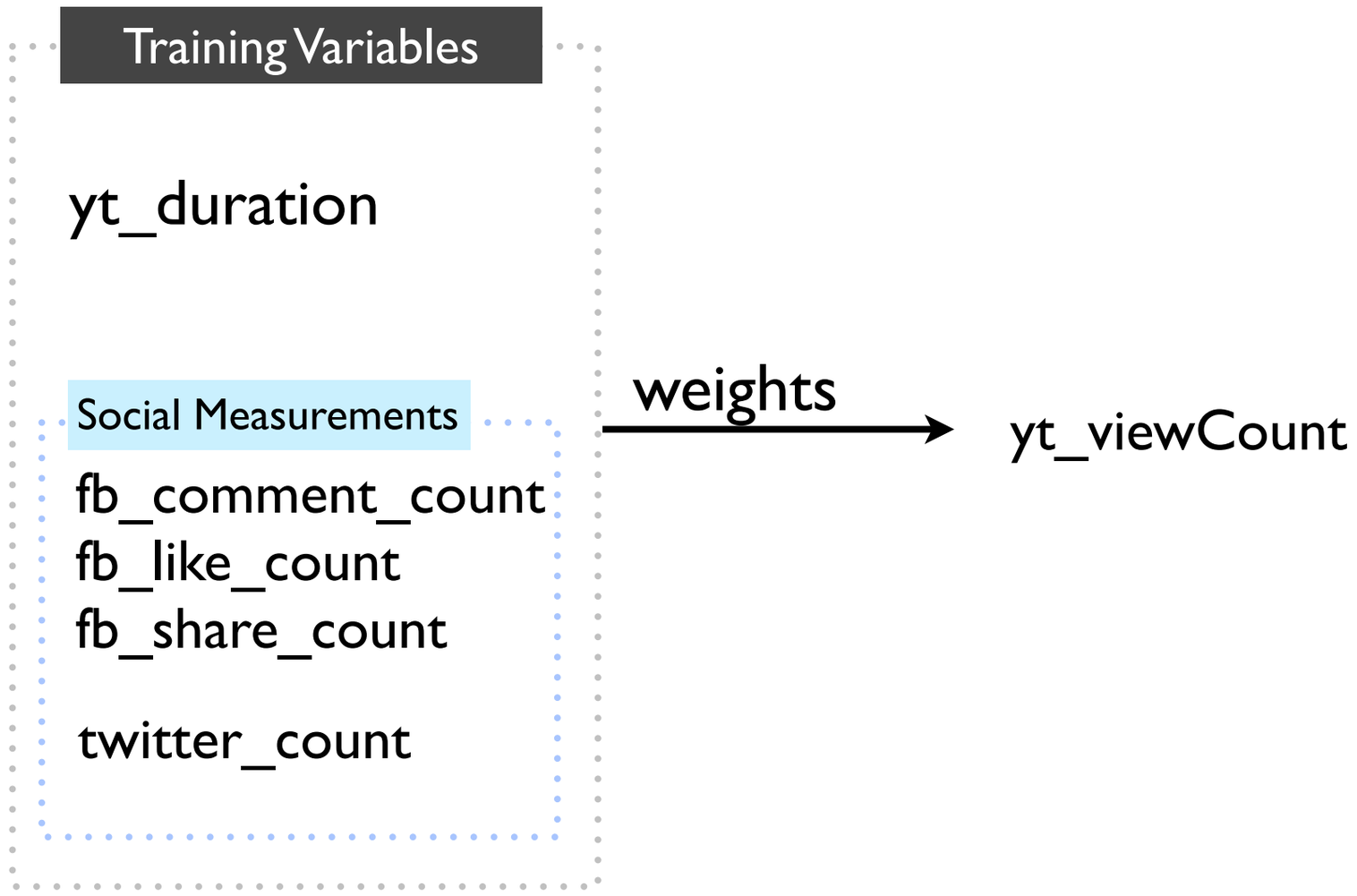
- Data Collection:
  - YouTube API
    - batch response ⟶ sweet! fast!

  - Facebook & Twitter API
    - one-by-one & POLICY! ⟶ slow.....(8+ hr)
    - accelerate? ⟶ think of sandwich!
    - (simple) MapReduce? ⟶ I School, OCF, MBA, ...

- Data Cleaning
  - empty data.....

3. Solution

- Model!
  - Classification? => Popular? (Spam?)
  - Still like to see the NUMBER! ⟶ Linear Regression



- Randomize!

3. Solution (details)

Combination Name	Factors	Accuracy
A	FB_like_count	0.356182150223
B	A + FB_share_count	0.683559070773
C	B + twitter_count	0.715320465006
D	C + FB_comment_count	0.748929818155
E	D + duration	0.749118154053
F	E + category	0.749048360611

4. Results & Insights

Attribute	FB_ like_ counts	FB_ share_ count	FB_ comment_ count	Twitter_ count	Duration (s)
Coefficient	-41.397	27.850	41.022	152.822	1.684

- Many Facebook users clicked the like button of the video, but did not watch.

- Social sharing through Twitter may be more powerful to attract audience rather than through Facebook.

- Insights

Our model can

- discover how the word of mouth promotion through social media affects the popularity of the video.

- suggest the video owners how to make their videos popular.

5. Demo

Demo

http://bit.ly/IncPoP