

Trend Analysis in TED Talks

Ву

- Nikhil Gudugula
- Siddarth Maredu
- Sathish Komire

What is a TED Talk and Why Did we choose it?

TED (Technology, Entertainment, Design) is a global platform that hosts a wide range of influential speakers who deliver engaging and thought-provoking talks on diverse topics.

Text Analysis





TED Partnerships

- Opportunity to be part of global culture
- Not just buying ad space
- Lasting relationship

Tools Used



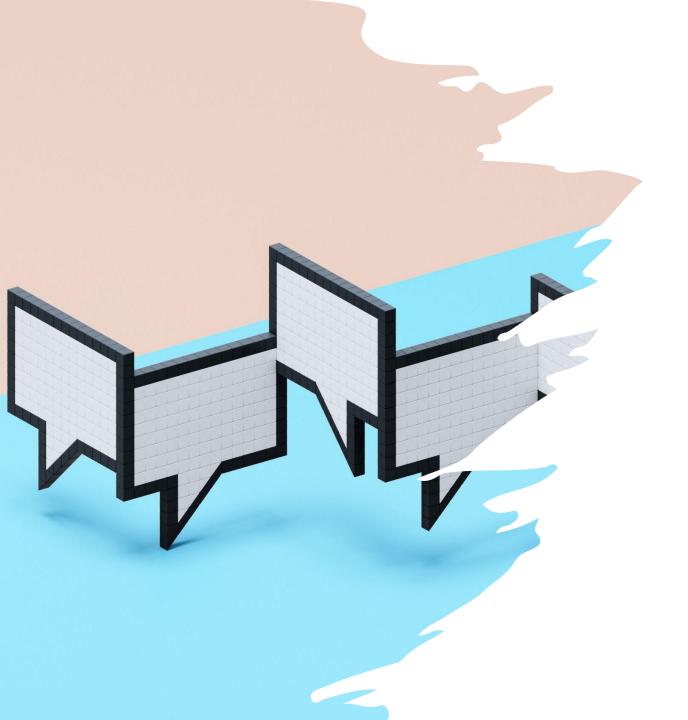
Data Cleaning and filtering



R – Data Wrangling and Analysis



Tableau - Visualization



Data Understanding

#Views

#Comments

Descriptions

Speakers

Titles

Transcripts

Data Cleaning

row	_id		ratings											
		1	[{'id': 7, 'n	ame': 'Funi	ny', 'count'	: 19645}, {'	id': 1, 'nam	e': 'Beautif	ul', 'count':	4573}, {'id	': 9, 'name	': 'Ingeniou	s', 'count':	6073
		2	[{'id': 7, 'n	ame': 'Funi	ny', 'count'	: 544}, {'id':	: 3, 'name':	'Courageo	us', 'count':	: 139}, {'id':	2, 'name':	'Confusing	', 'count': 6	52}, {
		3	[{'id': 7, 'n	ame': 'Funi	ny', 'count'	: 964}, {'id':	: 3, 'name':	'Courageo	us', 'count':	: 45}, {'id': 9	9, 'name': '	Ingenious',	'count': 18	33}, {
		4	[{'id': 3, 'n	ame': 'Cou	rageous', 'c	count': 760	}, {'id': 1, 'n	ame': 'Bea	utiful', 'cou	nt': 291}, {	id': 2, 'nam	ne': 'Confus	ing', 'count	t': 32



row_id	id	name	count
1	7	Funny	19645
1	1	Beautiful	4573
1	9	Ingenious	6073
1	3	Courageous	3253
1	11	Longwinded	387
1	2	Confusing	242
1	8	Informative	7346
1	22	Fascinating	10581
1	21	Unconvincing	300
1	24	Persuasive	10704

Data Transformation

```
Rows: 2,550
Columns: 17
$ comments
                     <int> 4553, 265, 124, 200, 593, 672, 919, 46, 852, 900, 7...
$ description
                     <chr> "Sir Ken Robinson makes an entertaining and profoun...
$ duration
                     <int> 1164, 977, 1286, 1116, 1190, 1305, 992, 1198, 1485,...
$ event
                     <chr> "TED2006", "TED2006", "TED2006", "TED2006", "TED2006...
                     <int> 1140825600, 1140825600, 1140739200, 1140912000, 114...
$ film date
$ languages
                     <int> 60, 43, 26, 35, 48, 36, 31, 19, 32, 31, 27, 20, 24,...
                     <chr> "Ken Robinson", "Al Gore", "David Pogue", "Majora C...
$ main speaker
                     <chr> "Ken Robinson: Do schools kill creativity?", "Al Go...
$ name
$ num speaker
                     $ published date
                     <int> 1151367060, 1151367060, 1151367060, 1151367060, 115...
                     <chr> "[{'id': 7, 'name': 'Funny', 'count': 19645}, {'id'...
$ ratings
$ related talks
                     <chr> "[{'id': 865, 'hero': 'https://pe.tedcdn.com/images...
$ speaker occupation <chr>> "Author/educator", "Climate advocate", "Technology ...
                     <chr> "['children', 'creativity', 'culture', 'dance', 'ed...
$ tags
$ title
                     <chr> "Do schools kill creativity?", "Averting the climat...
$ url
                     <chr> "https://www.ted.com/talks/ken robinson says school...
$ views
                     <int> 47227110, 3200520, 1636292, 1697550, 12005869, 2068...
```

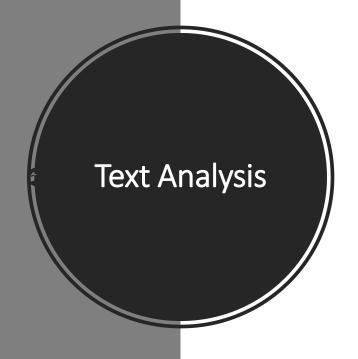
```
Rows: 2,550
Columns: 18
$ comments
                     <int> 4553, 265, 124, 200, 593, 672, 919, 46, 852, 900, 7...
$ description
                     <chr> "Sir Ken Robinson makes an entertaining and profoun...
$ duration
                     <int> 1164, 977, 1286, 1116, 1190, 1305, 992, 1198, 1485,...
                    <chr> "TED2006", "TED2006", "TED2006", "TED2006", "TED2006...
$ event
$ film date
                     <dttm> 2006-02-25, 2006-02-25, 2006-02-24, 2006-02-26, 20...
$ languages
                     <int> 60, 43, 26, 35, 48, 36, 31, 19, 32, 31, 27, 20, 24,...
                    <chr> "Ken Robinson", "Al Gore", "David Pogue", "Majora C...
$ main speaker
$ name
                    <chr> "Ken Robinson: Do schools kill creativity?", "Al Go...
$ num speaker
                    $ published date
                     <dttm> 2006-06-27 00:11:00, 2006-06-27 00:11:00, 2006-06-...
                    <chr> "[{'id': 7, 'name': 'Funny', 'count': 19645}, {'id'...
$ ratings
                     <chr> "[{'id': 865, 'hero': 'https://pe.tedcdn.com/images...
$ related talks
$ speaker occupation <chr>> "Author/educator", "Climate advocate", "Technology ...
                    <chr> "['children', 'creativity', 'culture', 'dance', 'ed...
$ tags
                    <chr> "Do schools kill creativity?", "Averting the climat...
$ title
$ url
                     <chr> "https://www.ted.com/talks/ken robinson says school...
$ views
                     <int> 47227110, 3200520, 1636292, 1697550, 12005869, 2068...
$ transcript
                     <chr> "Good morning. How are you?(Laughter)It's been grea...
```

Statistical Analysis

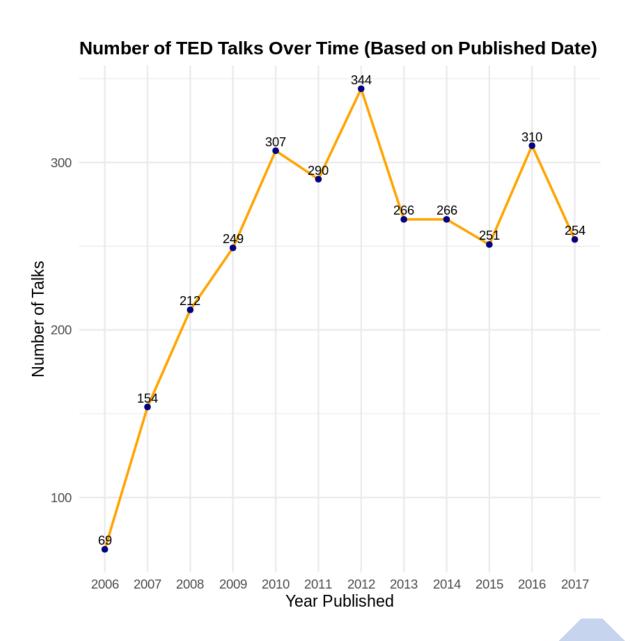
```
TED ID
                                num_speaker
                                            main_speaker
Min. : 1.0 Length:2972
                               Min. :1.00
                                            Length: 2972
1st Ou.: 632.8 Class :character
                               1st Ou.:1.00
Median :1280.5 Mode :character
                              Median :1.00
                                            Mode :character
Mean :1284.4
                               Mean :1.03
3rd Qu.:1952.2
                               3rd Qu.:1.00
Max. :2550.0
                               Max. :5.00
speaker occupation description
                                   duration
                Length:2972
                                 Min. : 135.0
Class :character Class :character
                                 1st Qu.: 582.0
Mode :character Mode :character
                                 Median : 848.5
                                 Mean : 830.1
                                 3rd Qu.:1047.5
                                 Max. :5256.0
 film date
                            published date
Min. :1972-05-14 00:00:00.00 Min. :2006-06-27 00:00:00.00
Median :2012-04-14 12:00:00.00
                            Median :2012-07-05 12:00:00.00
Mean :2011-12-05 13:51:28.83
                            Mean :2012-08-09 09:49:10.74
3rd Qu.:2014-11-19 18:00:00.00 3rd Qu.:2015-04-06 06:00:00.00
Max. :2017-08-27 00:00:00.00 Max. :2017-09-22 00:00:00.00
NA's :14
 languages
                comments
                                tags
Min. : 0.00 Min. : 2.0 Length:2972
                                             Length:2972
             1st Qu.: 63.0
                            Class :character Class :character
             Median : 117.0
Median :28.00
                            Mode :character Mode :character
Mean :27.16 Mean : 193.4
3rd Qu.:33.00
             3rd Qu.: 224.0
Max. :72.00 Max. :6404.0
                                                  ratings id
   url
                    views
                                  transcript
Length:2972
                Min. : 50443
                                                  Length:2972
                                 Length:2972
Class :character 1st Qu.: 761876
                                 Class :character Class :character
Mode :character
                Median : 1132964
                                 Mode :character Mode :character
                Mean : 1705681
                3rd Qu.: 1734962
                Max. :47227110
```

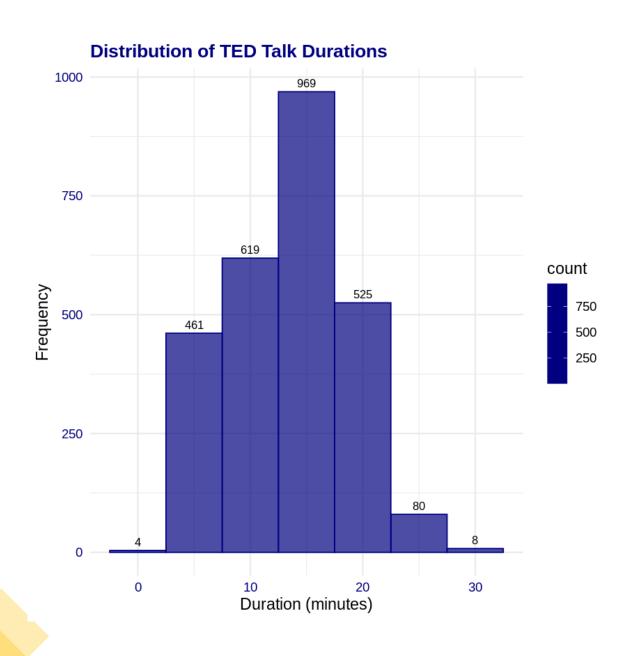
€	A tibble: 1 × 4						
	negative	positive	sentiment_score	neutral			
	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>			
	4425	6531	2106	0			

∃	A matrix: 4 × 4 of type dbl					
	duration	views	comments	languages		
duratio	n 1.00000000	0.04171085	0.1369176	-0.3005083		
views	0.04171085	1.00000000	0.5130712	0.3799774		
commer	nts 0.13691758	0.51307120	1.0000000	0.3106607		
languag	es -0.30050830	0.37997737	0.3106607	1.0000000		



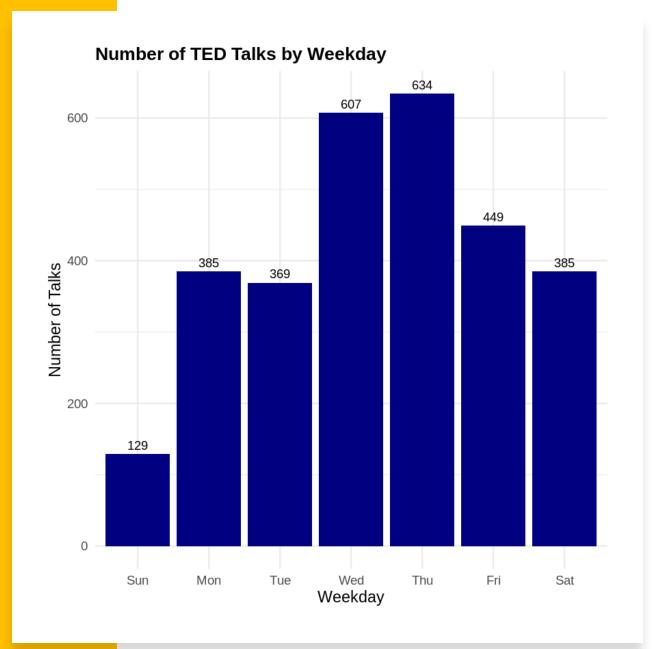
```
history suggests
       working explains better things need personal
around art human want day dont talks way help
                                           asks find question
                                           fellow see describes
                                          makes surprising
        technology stories look global health every lives use young research power worlds ever something build much david
         something build much david
```





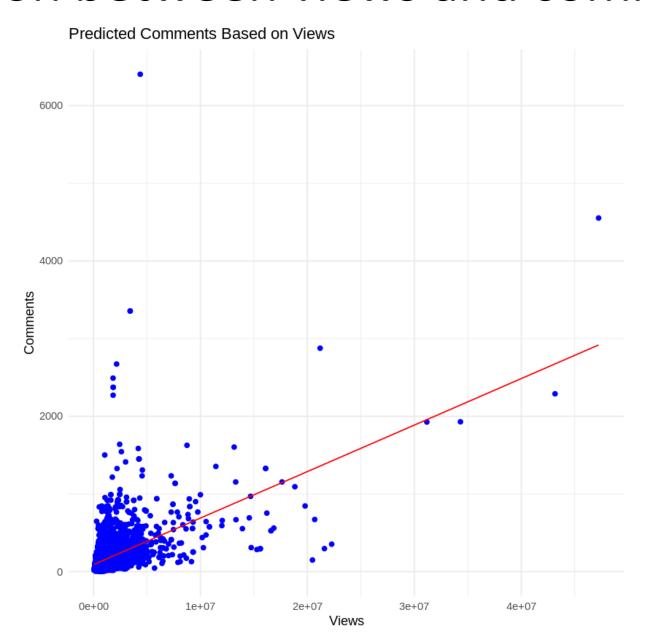
Top shares of talks by speaker occupation type

Writer 4.029% Thordis Elva and Tom	women's empowerment advocate	Musician 1.099% Rhiannon	writer 0.733%	
Stranger Writer	Author	Killalilloll	Al expert 0.733%	
	1.465% Emily Esfahani		Actor 0.733%	
activist 3.297% Tara Winkler	Entrepreneur 1.465%	Physician 1.099% Raj Panjabi	Athlete 0.733%	
activist	Sangu Delle		Cognitive	
	Filmmaker 1 465%	actress 0.733%		
Artist 2.198%	Wanuri Kahiu	designer 0.733%	Health activist	
Tomás Saraceno	TV journalist 1.465% Gretchen		Inventor 0.733%	
author 1.832%	Architect	lawyer 0.733%	Marketing leader	
Historian 1.832%	1.099% Band	musician 0.733%	Novelist 0.733%	
Journalist	1.099%	philosopher 0.733%	Physicist 0.733%	
1.832%	Designer 1.099%	producer 0.733%	Poet 0.733%	
Movement artist 1.832%	Futurist 1.099%	songwriter 0.733%	Roboticist 0.733%	

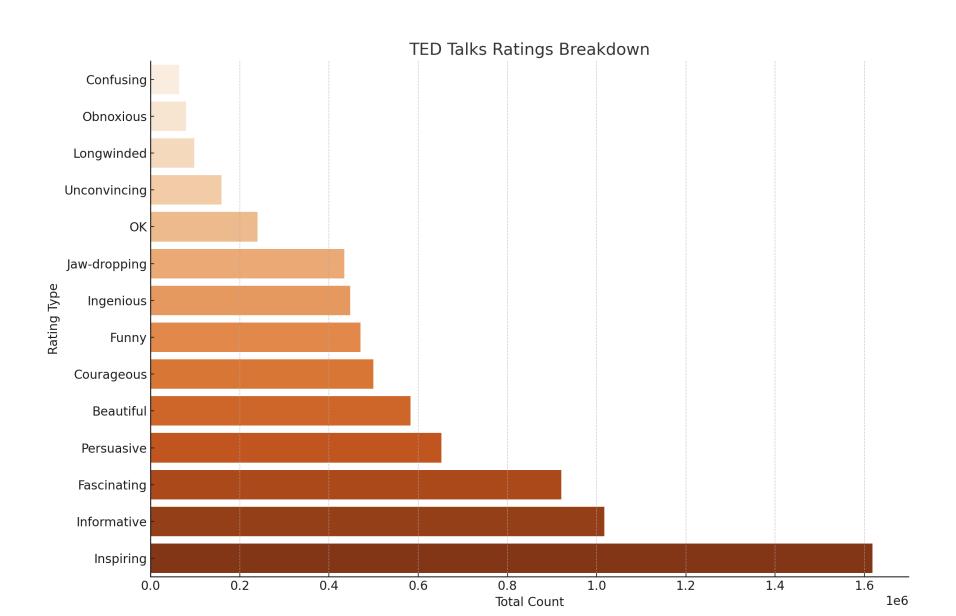


Number of talks published (WeekDay wise)

Relation between views and comments



Total count per Individual Rating Type



Challenges

- Choosing the dataset Ted Talks
- Handling nested structures in the dataset
- Learning Tableau
- Collaboration challenges



Any Questions?