

Ranking YouTube Videos With Sentiment Analysis

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Overview

- Problem
 - How to figure out which YouTube video to watch among ones that are returned given your query?
- Solution
 - Use sentiment of the comments of each video to determine which are the best videos to watch

Example Use Cases

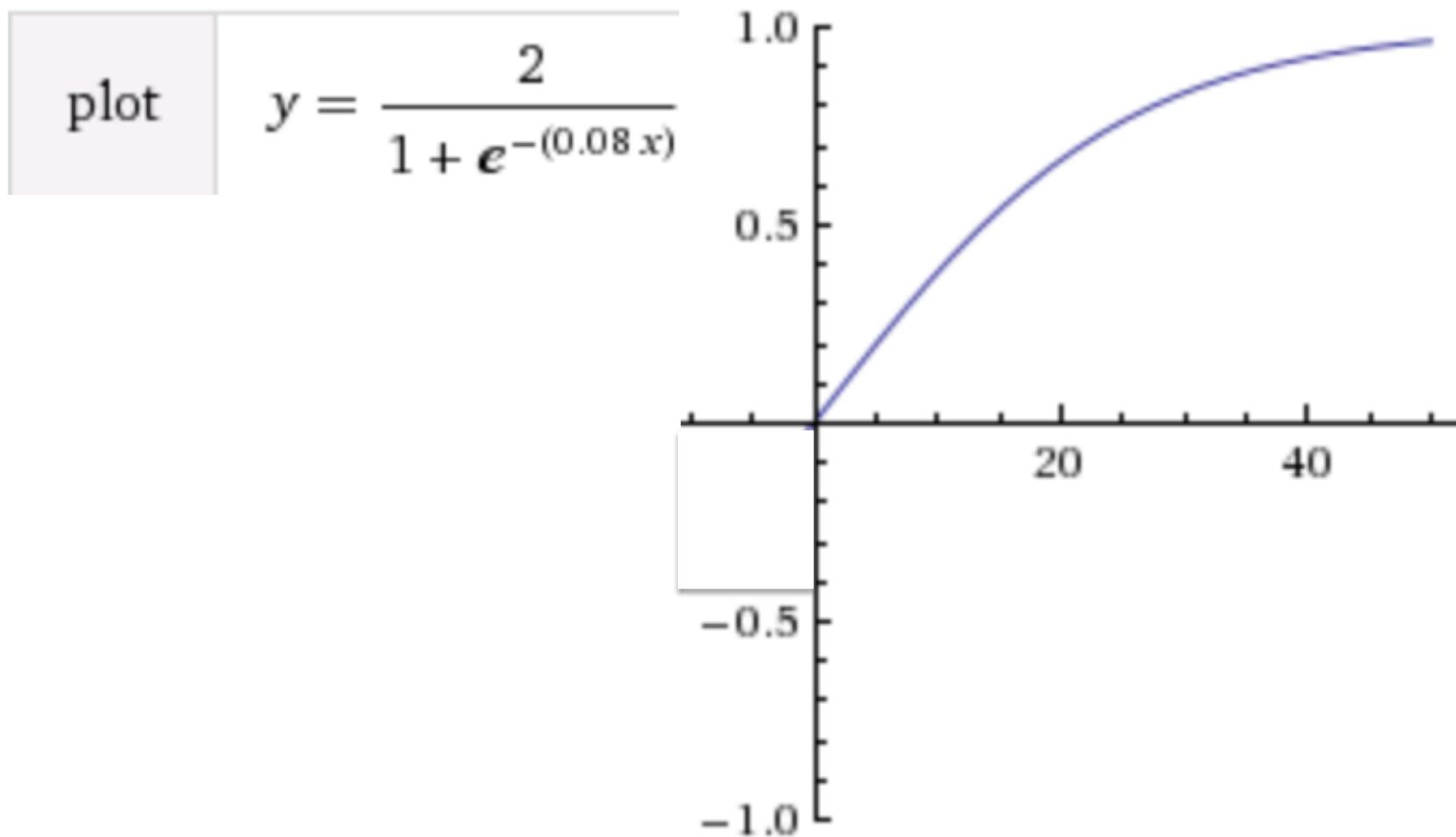
Find Best Videos to:

- Cure Yourself of a Headache
- Learn Hadoop
- Make Yourself Laugh

Sentiment Score Calculation

- BeautifulSoup to scrape comments of the videos given a query
- Used Monkey Learn to extract sentiment of comments
- Sentiment Score = (# Positive – Negative) / Total
 - Number between -1 and 1
 - Adjusted for total number of comments using sigmoid
- Each query took ~ 2 mins to calculate sentiment score so sentiment scores were stored in MongoDB database

Custom Sigmoid to Adjust Sentiment Score for Number of Comments



Query: “Hawaii”

- IUTHnxoEOPQ 57.7% ←
- V9YvCuLzFHc 55.7%
- 0TraYbBVRH4 54.9%
- xjfVDxttN7Y 53.8%
- fahr069-fzE 49.7%
- 9BgilfaXTtA 41.4%
- SdIaEQCUVbk 39.9%
- hwhvByj8YG8 33.8%
- ZAjASemgx3E 21.6%
- vSROSencBss 17.0%
- Q8NXO6YxBmU 12.9%
- Qwr6yMcD7Kk 12.7%
- ccnwzScp6bM 12.2%
- 9g-5J05BliQ 11.9%
- B9FhV3BG58U 9.3%
- UxJxF_pelp0 0.0%
- 3zxAX6ozbgk 0.0%
- DHHAR1S_eKA 0.0%
- QguEfBMhpyc -43.7% ← Why??

Query: “Hawaii”

Highest Sentiment Score

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YouTube  hawaii 



Hawaii Five O Intro
bfelten   2,200 9,289,775  11,823  356

Up next Autoplay 


Keychains unlike
any you have ever seen
TOUCHOFMODERN


Top 10 Films That Derailed The Franchise
by WatchMojo.com
1,052,833 views
13:17


Hawaii Five-O - Theme Song [Full Version]
by TvThemesSongs
6,336,259 views
3:29


Top 10 TV Theme Songs (with Words)
by WatchMojo.com
1,193,222 views
8:54


HAWAII FIVE O S4 gag reel
by Dana Scully
185,377 views
9:54


RETRO TV'S TOP 50 GREATEST TV THEMES
OF ALL-TIME
by RETROTV AND MUSIC 1394

Uploaded on Apr 1, 2007
The Greatest Theme Song Of All Time

Comments

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YouTube hawaii

Top comments ▾

 **blica 1** 4 months ago
One of my late Dad's favorite shows.. I hear this theme and automatically think of him..
Reply · 14  

 **materialgirl8707** 1 week ago
+blica 1 Lovely memories. Same here
Reply · 2  

 **Paulo Santos** Shared on Google+ · 3 months ago · Shared to Músicas anos 60,70 e 80
16  
[View all 8 replies](#)

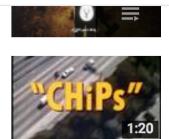
 **Celio Esteves** 3 months ago
Eram muito boas as séries,tinha também Kung Fu,Mulher Maravilha,A Ilha da Fantasia,Túnel do Tempo,Família Dó-Ré-Mi..foi uma época de ouro!
2  

 **Lair Souza** 3 months ago
tempo maravilhoso,boooooommmmd+
 

 **magnetmac1** 4 months ago (edited)
I challenge anyone to give an example of any intro theme song and it's footage with so much more intensity than Hawaii 5.0. This whole thing was recorded back in the late 60s and till today no TV show has been able to outdo Hawaii 5.0's intro song.
Reply · 12  
[View all 10 replies](#)

 **matatanXtreme** 6 days ago
+magnetmac1 miami vice ?
Reply · 1  

 **magnetmac1** 6 days ago

 **CHiPs intro HQver.**
by chpyas
1,438,233 views
1:20

 **(Hawaii Five-0) McRoll Reunion 2015 (S05E25)**
by LuckyStar Phạm
114,901 views
4:21

 **Hawaii five o bloopers season 3**
by McDanno31
573,431 views
9:09

 **(STEREO) A Fistful Of Dollars by Ennio Morricone**
by fistful3
11,262,094 views
2:59

 **Tom Hanks Fights the Fonz**
by carpaltion
1,481,532 views
6:52

 **Steve + Catherine (Hawaii Five-0) McRoll**
by DesireeLee
79,478 views
14:30

 **JOHNNY RIVERS - Secret Agent Man 1966**
by boyblue
3,409,530 views
3:10

 **Deep House Vocal Hits 2015 HD Mix Wonderful Life**
by The Mix Dealer
Recommended for you
25:20

Query: “Hawaii”

Lowest Sentiment Score

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YouTube hawaii

abc NEWS EXCLUSIVE COURTESY: FERDINAND PUENTES abc NEWS EXCLUSIVE PLANE CRASH CAUGHT ON TAPE CAMERA CATCHES CRASH DRAMA UP CLOSE abc NEWS

Up next Autoplay

- sinking of the concordia caught on camera hdtv x264 c4tv p by Matt Antcliff 3,196,279 views 4:57
- When Filming Extreme Dares Ends Very Badly | Nightline | ABC News by ABC News 10,357,001 views 5:45
- Gunman Kills Self After Opening Fire on Florida School Board | Nightline | ABC News by ABC News 3,484,331 views 2:28
- Lone Survivor of 1987 Plane Crash Breaks Silence by ABC News 959,037 views 7:17
- Caught on Tape: Passenger Screams Bomb on Plane | Good Morning America | ABC News by ABC News 647,995 views 1:57
- WORST PLANE CRASHES CAUGHT ON CAMERA!! by BestOf2014 13,846,002 views 7:20
- Near death airplane collision with skydiver in free fall by forest pullman 7,276,761 views 4:15
- OFFICIAL FOOTAGE From Inside the Plane as Southwest Flight 345 Crash Landed at by Bryan Foster 1,219,957 views 2:43

Hawaii Plane Crash Caught on Tape | Good Morning America | ABC News

ABC News   1,372,206 6,498,604

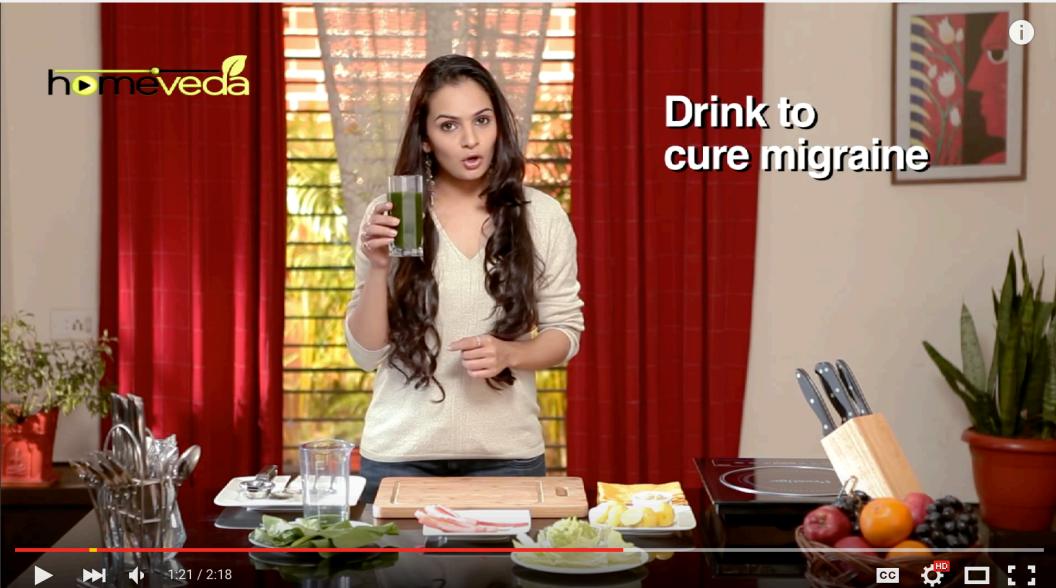
Add to Share More  14,680  1,300

Published on Jan 10, 2014 Watch the exclusive video of a small passenger plane making a crash landing on water on the way to Hawaii – caught on tape using a GoPro.

Query: “Home Remedies for Headaches”

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YouTube    



Aches & Pains - Migraine - Natural Ayurvedic Home Remedies

Homeveda - Home Remedies for You!

Subscribe 422,430

Published on Jun 28, 2012
Don't forget to check out our brand new website - <http://bit.ly/hmvdesc>

100,223  292  18

Up next Autoplay 

Baba Ramdev -Yoga for Migraine & Epilepsy(Migraine Va Mirgi)
by Rajshri 1:06:38 171,248 views

Olay MicroSculpting Cream AD by Olay North America 0:46 194,812 views

MENSTRUAL PROBLEMS TOP 2 REMEDIES Aches & Pains - Menstrual Problems - Natural Ayurvedic Home Remedies by Homeveda - Home Remedies for You! 2:01 180,269 views

DIY SKIN PEELS DIY Skin Peels by Homeveda - Home Remedies for You! 3:10 185,932 views

Skin Care - Blackheads - Natural Ayurvedic Home Remedies by Homeveda - Home Remedies for You!

Query: “Funny”

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YouTube Upload

funnygummy.com

0:27 / 2:43

▶ ▶ ⏪ Up next Autoplay

TRY IT FREE FOR 30 DAYS!

Up next Disco polo Gumi míš by xGamerProPLAgainHD 35,049,076 views 2:21

Mix - Je m'appelle Funny Bear - Full French Version - Gummy Bear Song by YouTube 50+ VIDEOS ((→))

The Gummy Bear Song - Long English Version by icanrockyourworld 605,980,481 views 2:44

Yo Soy Tu Gummy Bear - Full Length Spanglish Version - The Gummy Bear Song by icanrockyourworld 36,883,038 views 2:42

Eu Sou O Ursinho - Full Length Brazilian Version - The Gummy Bear Song by icanrockyourworld

Je m'appelle Funny Bear - Full French Version - Gummy Bear Song
icanrockyourworld 620,916 202,499,447
116,383 43,771

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Uploaded on Oct 15, 2007 http://www.gummibar.net - From the CD "I Am Your Gummy Bear".

Query: “Learn Hadoop”

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YouTube ▾

Preparing HDFS Writes

I want to write file.txt Block A

OK. Write to DataNodes [1, 7, 9]

NameNode

Awareness

Client

F

A B C

DataNode 1

DataNode 7

DataNode 9

Rack 1

Rack 5

Up next

HDFS Architecture by Durga Software Solutions 86,352 views 1:06:33

Understanding HDFS using Legos by NewCircle Training 5,397 views 15:03

YARN: Hadoop Beyond MapReduce by NewCircle Training 29,949 views 47:08

Realtime Analytics for Big Data: A Case Study by NewCircle Training 42,923 views 1:02:00

MongoDB: It's Not Just About Big by NewCircle Training 25,229 views 33:57

Introduction to Hadoop by Durga Software Solutions 160,350 views 28:37

HDFS Architecture by SpringDeveloper

Autoplay

marakana

21:23 / 33:35

Hadoop Tutorial: Intro to HDFS

NewCircle Training

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 **Ramsimran Singh** 6 hours ago
one of the best tutorial till now :)

GOOD JOB Sameer :)

Reply .  

 **Ramdas Narayanan** 3 weeks ago
excellent presentation, the slides especially related to storage on HDFS were really good.

Reply .  

 **Rahul Agrawal** 1 week ago (edited)
Worth watching the video, indeed helpfulWould like to see more technical details in this space

Reply .  

 **WASHIM RAJA AKASH** 1 week ago
nice presentation.Read, write, blocking & distributing of files concept described is very good

Reply .  

 **paul k** 2 months ago
PFA Input File, Explanation and Abstract for your POC on MR. Please start working on the same and revert back with your findings.

Extra: Using Neurolab's Neural Network to Predict Upvotes vs. Downvotes

```
139 # PREDICT UPVOTES - DOWNVOTES BY USING SUBSCRIBERS, MY SENTIMENT SCORE AND VIEW COUNT
140
141 #Factors to use to predict upvotes-downvotes
142 sentiment_score_query = [ sorted_final_results[i][1]['sentiment_score'] for i in range(1,21) ]
143 subscribers_query = [ sorted_final_results[i][1]['subscribers'] for i in range(1,21) ]
144 view_count_query = [ sorted_final_results[i][1]['view_count'] for i in range(1,21) ]
145
146 #upvotes-downvotes: Predict this
147 output_query = [ sorted_final_results[i][1]['output'] for i in range(1,21) ]
148
149 NNinput = np.column_stack([sentiment_score_query, subscribers_query, view_count_query])
150 NNtarget = a = np.array( output_query )
151 NNtarget = NNtarget.reshape(-1,1)
152
153 ssrange = [ -1, 1 ]
154 #subrange = [ min(subscribers_query), max(subscribers_query) ]
155 subrange = [ 0, 10000000 ]
156 #viewrange = [ min(view_count_query), max(view_count_query) ]
157 viewrange = [ 0, 10000000 ]
158
159 # Create network with 2 inputs, 5 neurons in input Layer and 1 in output Layer
160 net = nl.net.newff( [ ssrange, subrange, viewrange ], [5, 1] )
161 err = net.train(NNinput, NNtarget, epochs=500, show=100, goal=0.02)
162
163 # do in-sample prediction
164 out = net.sim(NNinput)
```