Exploration of Facebook "Talking About" count

Capstone project for The Data Incubator

Daria Pankova | November 19, 2019

What gets people's attention?

How can one find that out?
Has a marketing event had an effect? Was a controversial incident noticed?
With the data social media collects, answering those questions is possible!

⇩

likes, posts, shares, questions, events, photo tags, check-ins, etc.
Facebook records every instance of someone interacting with a company page on Facebook in any impactful way.

⇩

Talking about count (TAC)
The number of such interactions by unique users within a week equals to page's "talking about count".

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Impactful events
By looking at TAC and a sentiment behind it (likes), I would like to create a **dataset** of **"impactful events"** and analyse it.

Dataset: companies' facebook page statistics

I will start by using the dataset Thinknum has made available:

➔ 432M size
➔ 2015 to mid 2018 (daily update)
➔ 3.5M entries
➔ 4950 different companies
➔ Contains:
  ◆ Number of likes
  ◆ Location check-ins
  ◆ Talking about count

FACEBOOK_TALKING_ABOUT_COUNT_AND_LIKES
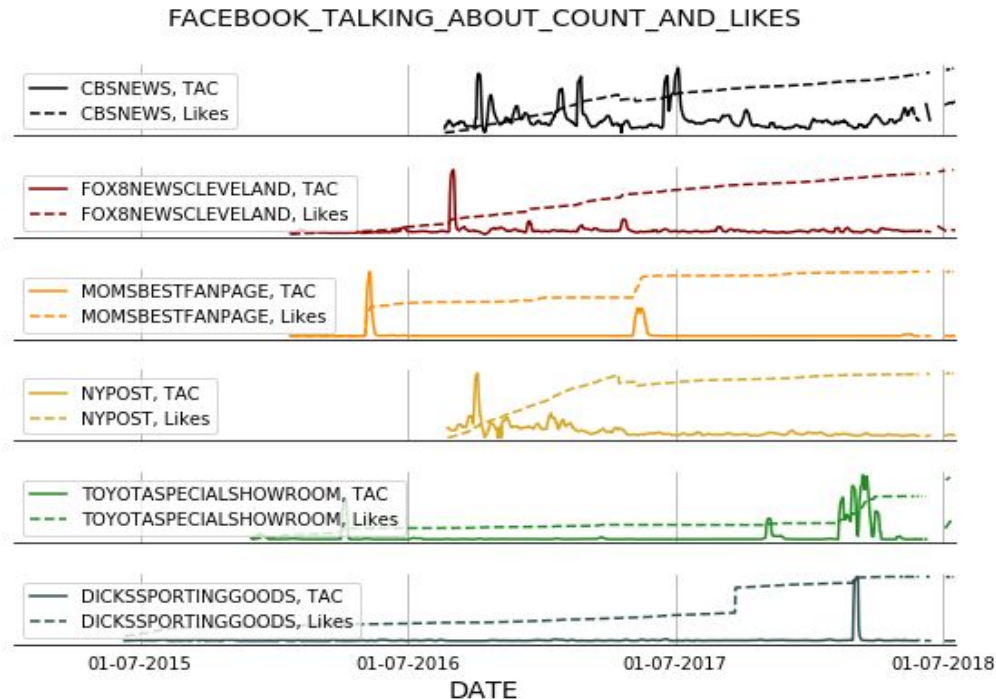
TAC and likes for 6 companies with the biggest spikes in TAC

Confirmation (2 examples)

Mom's Best Cereal: **Mother's day video (72M views)**

zoom
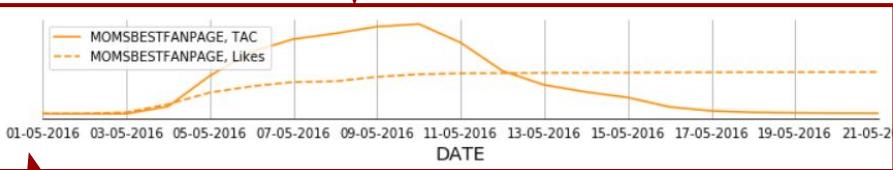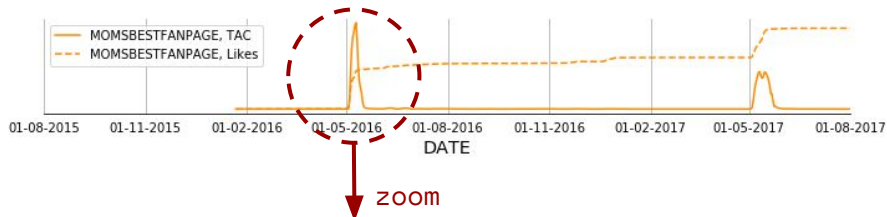
Videos

Here's to the most glamorous job on... - Mom's Best Cereals

Facebook - May 1, 2016

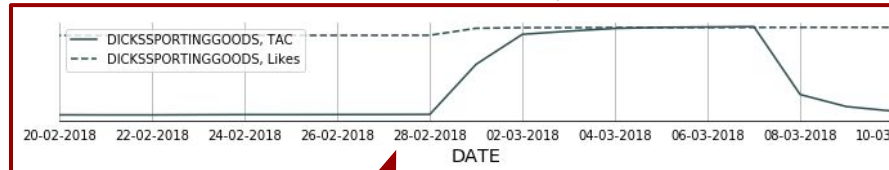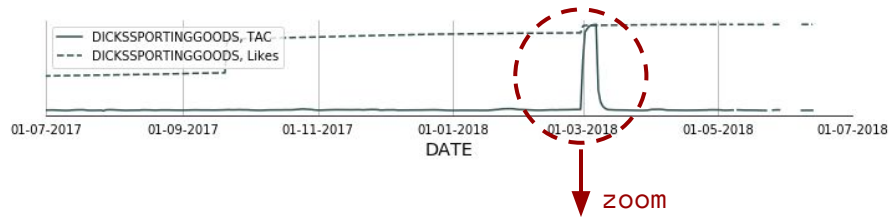Here's to the most glamorous job on... - Mom's Best Cereals

Facebook - May 5, 2016

Here's to the most glamorous job on... - Mom's Best Cereals

Facebook - May 1, 2016

Dicks's Sporting Goods: **Weapon sale policy**

zoom

MONEY

Dick's Sporting Goods bans sales of assault-style weapons after Parkland, Florida school shooting

Nathan Bomey USA TODAY

Published 7:31 a.m. ET Feb. 28, 2018 | Updated 12:27 p.m. ET Feb. 28, 2018

Automating peak selection

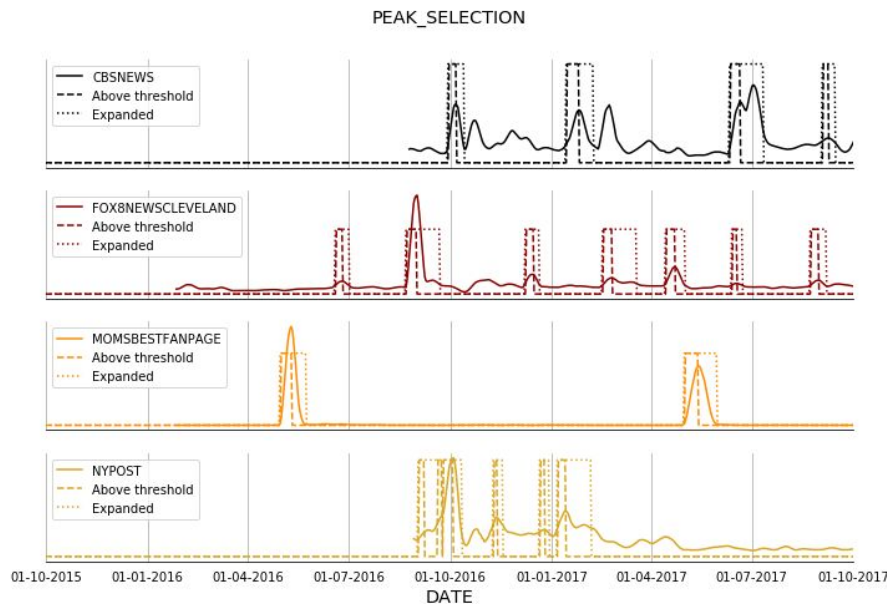Complex problem. My best effort so far is shown on the plot:

➜ **Smooth data**
  ◆ Convolution with a Gaussian
  ◆ Gaussian STD = 2 days

➜ **Select Peak intervals**
  ◆ TAC must cross threshold of mean+3 STD
  ◆ Mean and STD calculated over past 30 days

➜ **Improve duration estimation**
  ◆ Find minimum value for the peak interval
  ◆ Expand interval until the value goes below that minimum

TAC for 4 companies:
Solid line - smoothed TAC,
Dashed line - peak intervals,
Dotted line - expanded intervals.

Dataset (in process)

I record peaks found by algorithm and their characteristics into a dataset.

	name	time	google	facebook	time_window	loc	height_std	height_count	duration	likes
0	CBSNews	[2016-09-27, 2016-09-29]	CBSNews after:2016-09-27 before:2016-09-29	CBSNews after:2016-09-27 before:2016-09-29 sit...	[608, 622]	[608, 622]	6.405724	3.975333e+06	14	0.025468
1	CBSNews	[2017-01-12, 2017-01-14]	CBSNews after:2017-01-12 before:2017-01-14	CBSNews after:2017-01-12 before:2017-01-14 sit...	[715, 739]	[715, 739]	3.780496	2.702325e+06	24	0.043200
2	CBSNews	[2017-06-09, 2017-06-11]	CBSNews after:2017-06-09 before:2017-06-11	CBSNews after:2017-06-09 before:2017-06-11 sit...	[863, 893]	[863, 893]	9.206388	4.505839e+06	30	0.034245

I found ~30 thousand peaks, with current settings.

Next steps:

➔ Finding information about events that correspond to the peak.

➔ Collecting some information about them automatically, for statistical analysis. Or focusing on a smaller selection.

➔ Interface.

Thank you!