

Final Presentations

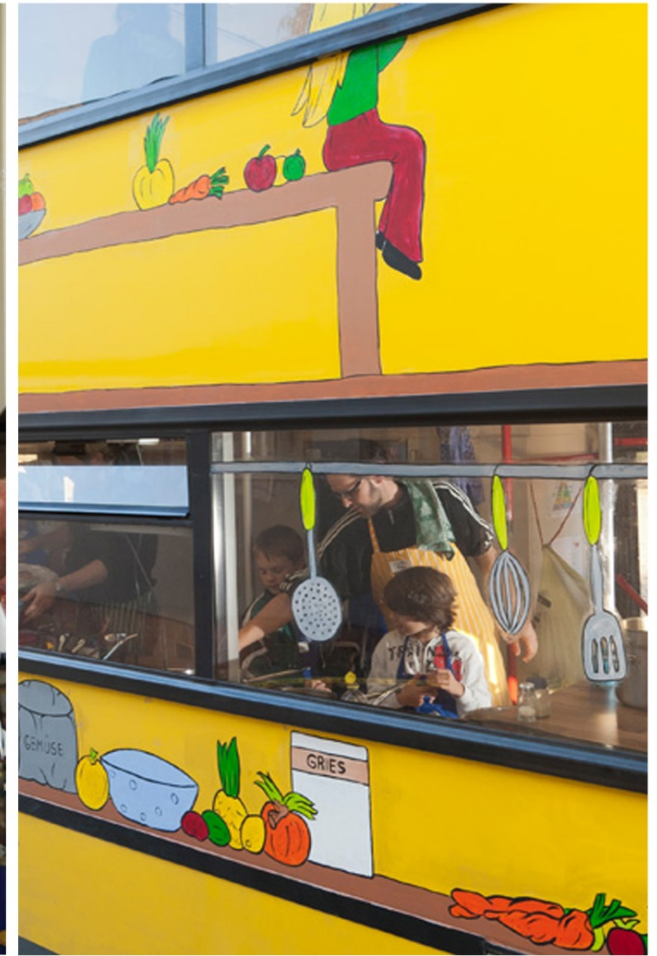
Berliner Tafel



Klassik
Lebensmittel für soziale Einrichtungen



LAIB UND SEELE
Eine Aktion der Berliner Tafel e.V., der Kirchen und des rbb



KIMBA
Ein Angebot der Berliner Tafel e.V.

BERLINER Tafel E.V.

IMPACT

Since the Berliner Tafel has only 25 permanent employees, the public relations section must work as efficient as possible so that enough donations can be collected to finance the work. The project is intended to support Berliner Tafel to design its public relations work as efficient as possible.

Due to this project, the fundraising and public relations teams are able to better understand the donation behavior. As a result, they are able to work together more purposefully in the future.

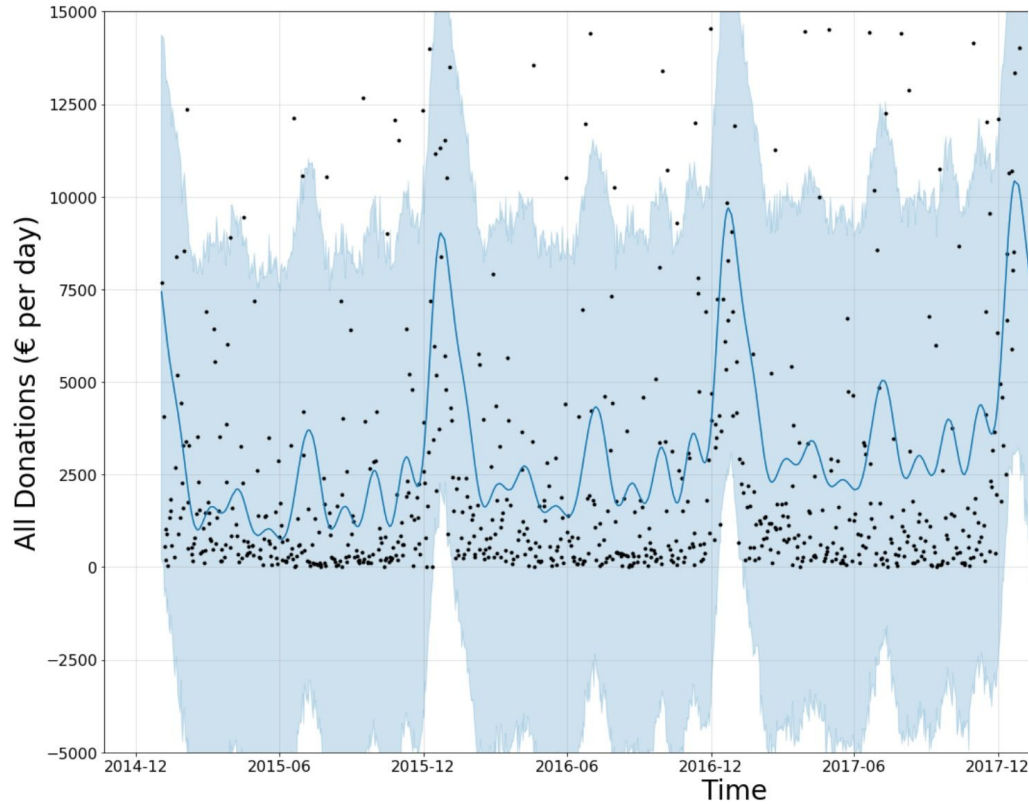
Additionally, both teams need an overview of responses towards press releases, interviews, Facebook posts, news bulletins and their impact to understand what, when, and through which channels can be communicated most productively.

PROJECT GOALS

- Is there a correlation between PR work and donations (depending on medium or topic...)?
- Which donor reacts to which campaign? Is it possible to identify/categorise donors based on reactions on events/campaigns?
- Are we actually winning new members when making calls for new members or giving an *interview* (radio, TV, newspaper...)?
- How do our campaigns affect the donation behaviour?
- Which are the best and the worst times of the year for donations and calls for donations/new members?
- What kind of impact does our PR work via FB have? Which wording or topic is good? Is there any correlation with donors' behaviours?

**Team Andreas, Gosia, Christian,
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1st Hypothesis: PR Activities are Driving Donations

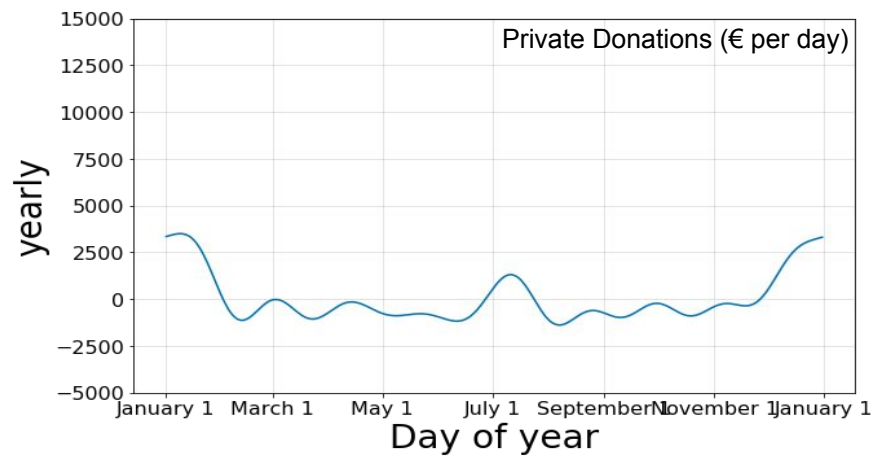
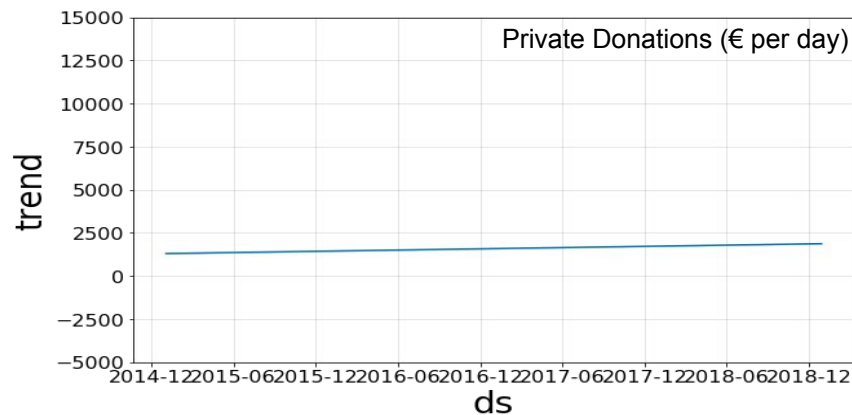
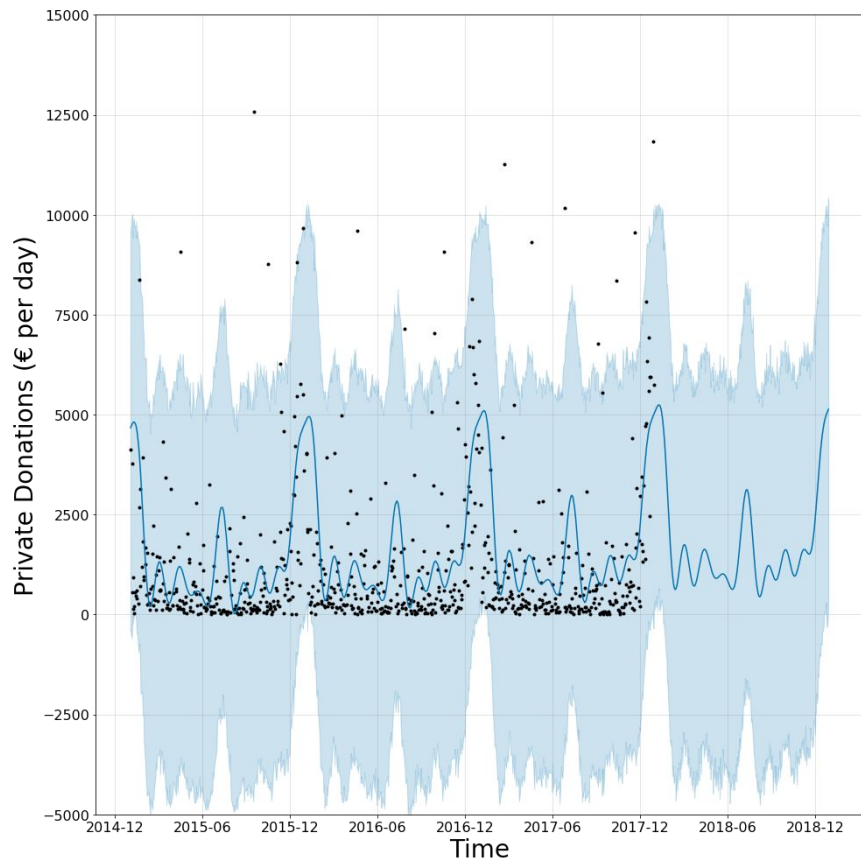


32.223 donations
from 2015-2017

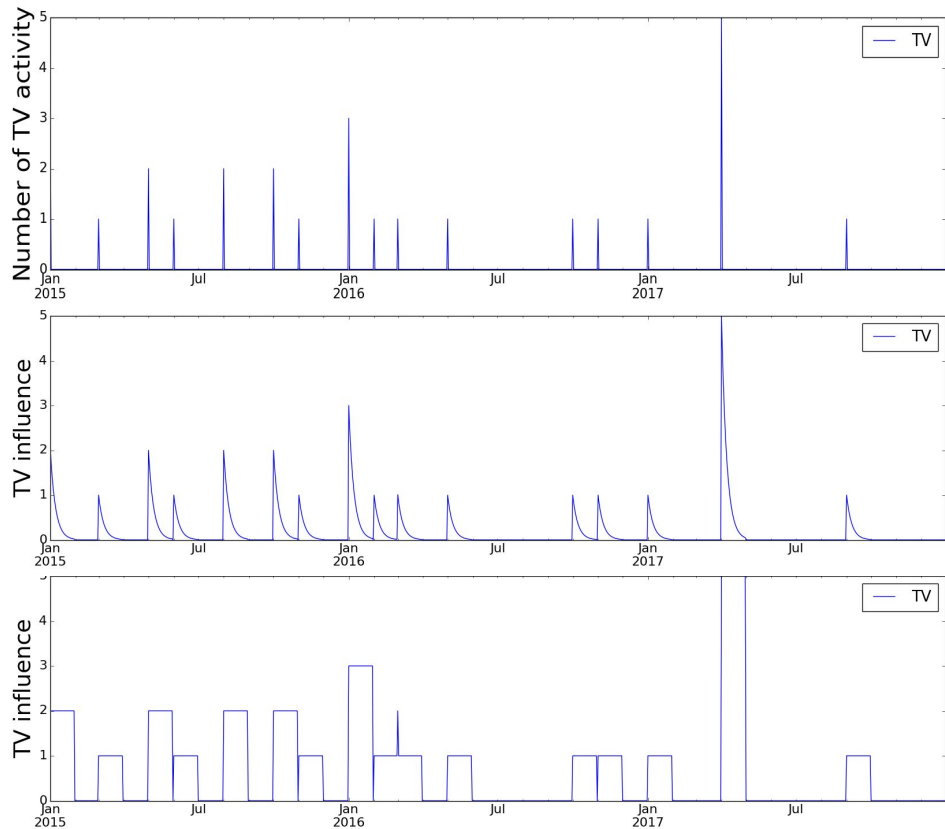
Good news: there is clearly a positive trend!
Now let's separate private from company donors

Private Donations with (Small) Positive Trend

After eliminating seasonality



TV Appearance Should have High Impact on Private Donation



- Data extracted from media dataset
- 26 TV appearances over the 3 year period
- Modeling of TV influence
 - by applying a exponential filter
 - Constant influence over a period of time

Idea: Correlate Time Series to Prove Impact of TV Appearances on Donations

- Time series 1 = TV Appearances
- Time series 2 = Private Donations
- Attention: Donations series has seasonal patterns => need to decompose before correlation analysis
- Donations **residual** signal = original data - trend - seasonality

Private Donations (€ per day)

	y	residual
count	1096.000000	1096.000000
mean	1039.442929	-2.313173
std	3454.763618	3266.431344

Correlation approx 5%

We cannot see a clear correlation that proves the impact

Looking at ALL PR Activities ...

Data Subset: only **single** donations by **private** people

-> Before: 32224 After: 7541

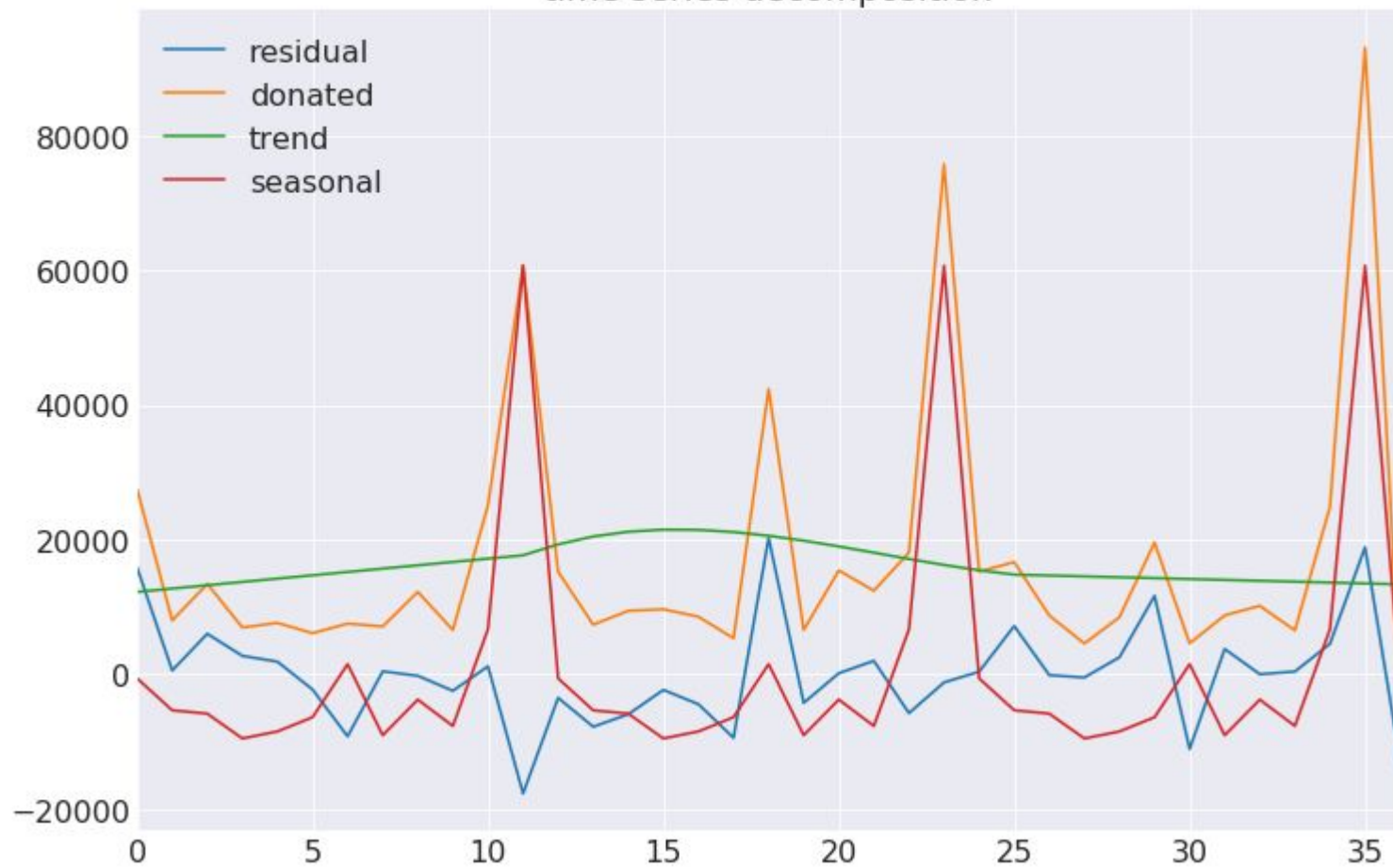
Data Aggregated over whole Month

counting number of all:

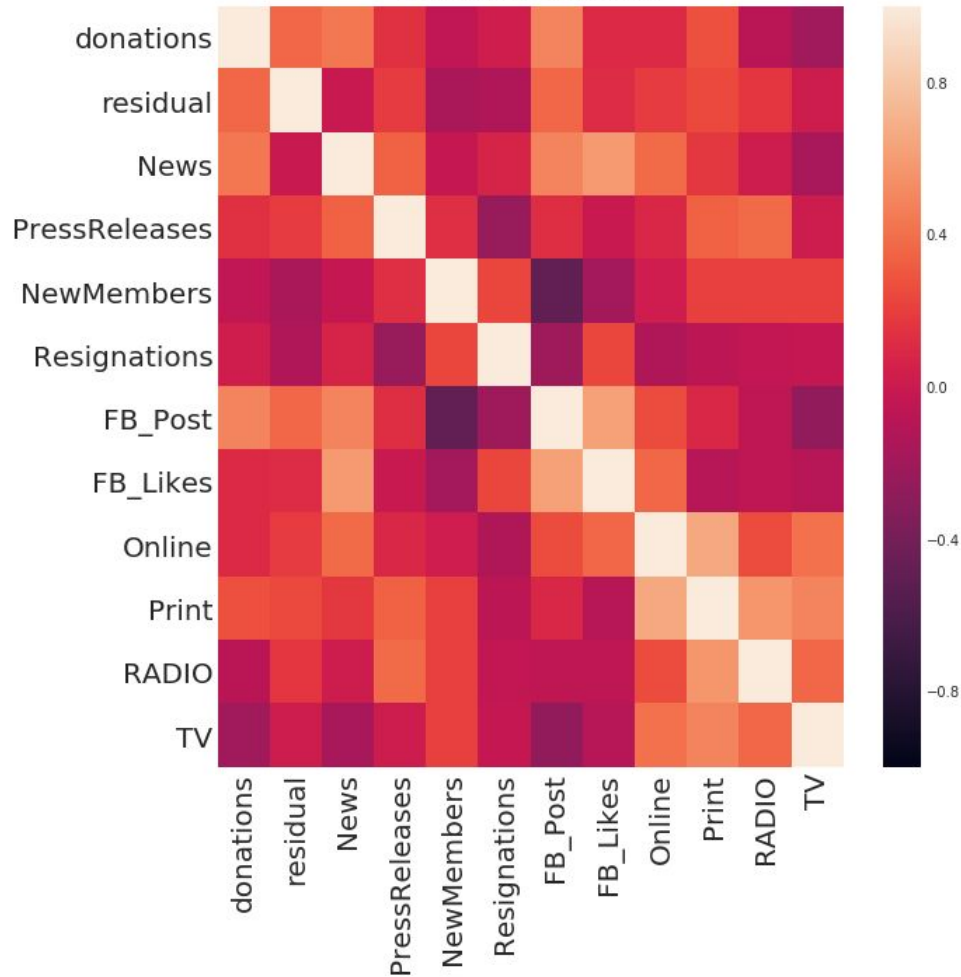
News, Press Releases, New Members, Resignations,

Facebook Posts, Facebook Likes, Online, Print, RADIO, TV

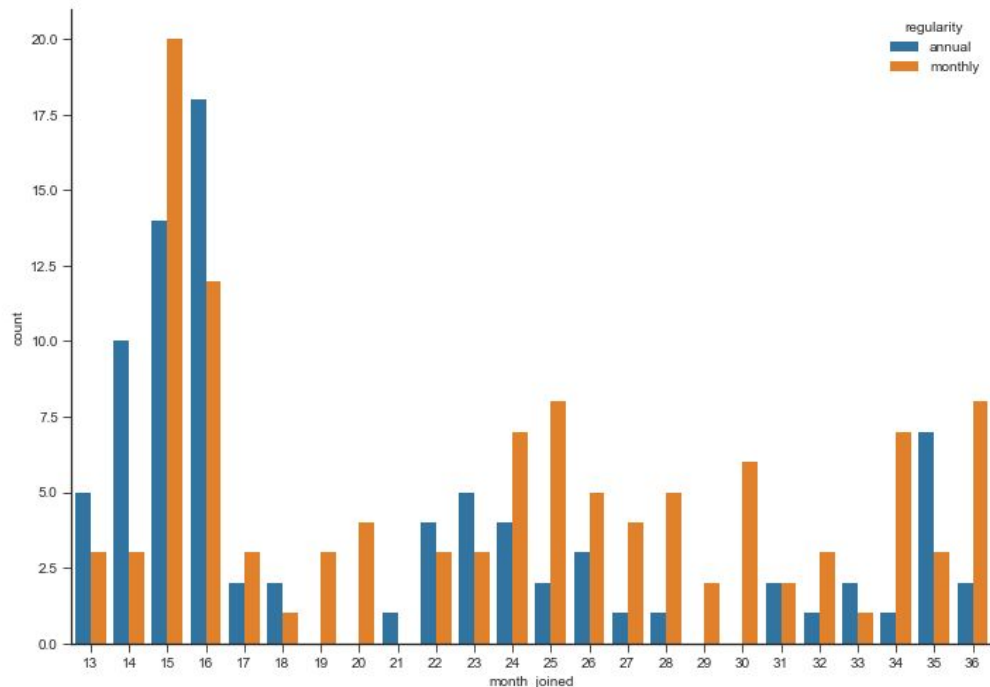
time series decomposition



Heatmap showing the correlation matrix for 12 variables: donations, residual, News, PressReleases, NewMembers, Resignations, FB_Post, FB_Likes, Online, Print, RADIO, and TV. The color scale ranges from -0.8 (dark purple) to 0.8 (light orange).



2nd Analysis: When do people become new members?



Bulk also around Christmas
like individual donations

But spread out more in
months before and after

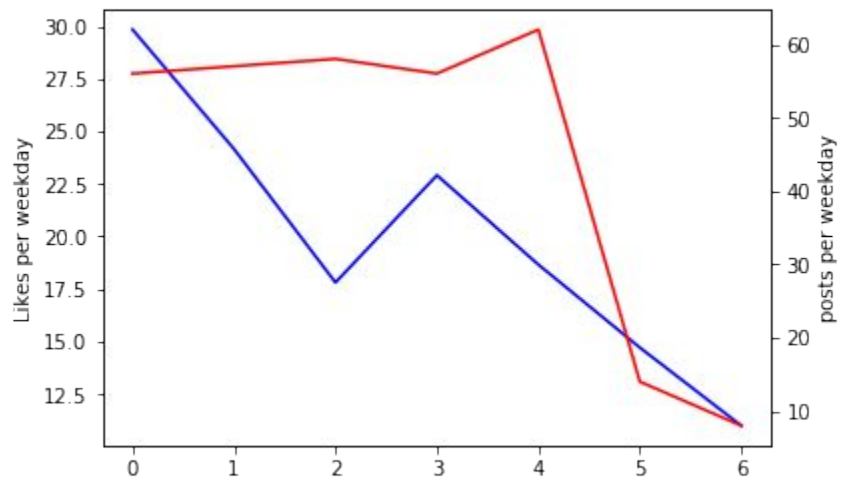
Big internal changes create
their own dynamics
(Feb-Apr 2016)

3rd Analysis: Does the Facebook posting time affect the number of likes?

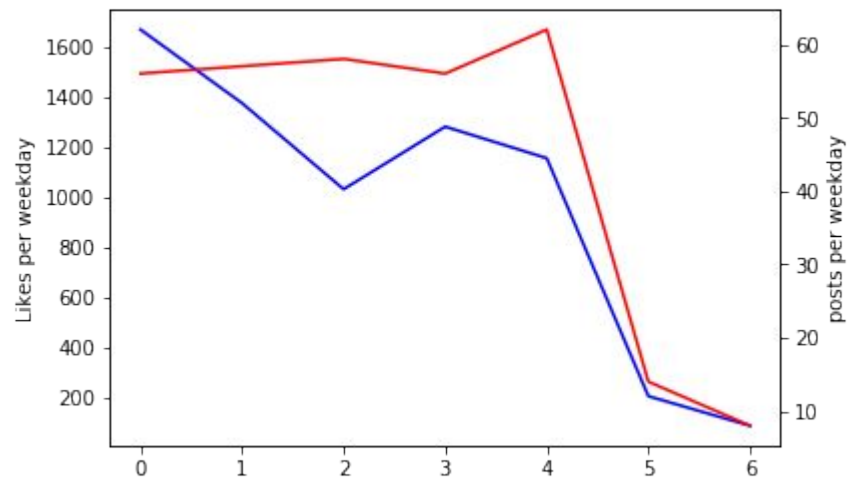
Facebook data:

- Likes, posts, comments
- General likes of people that interact in the facebook page

Count of posts vs Mean of likes

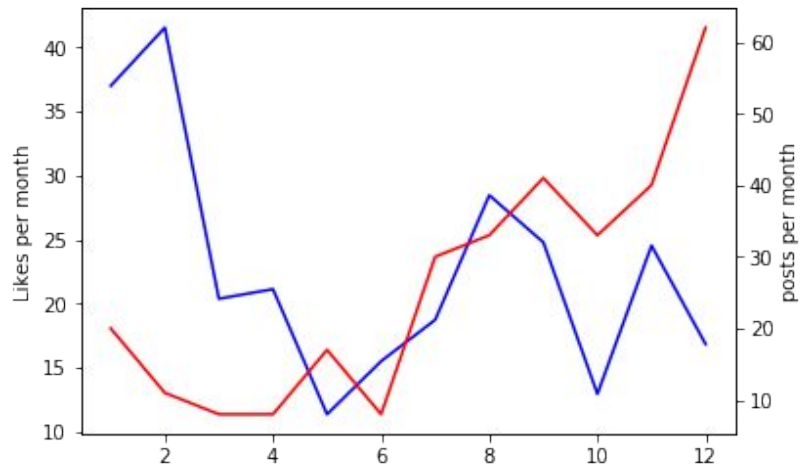


Count of posts vs Sum of likes

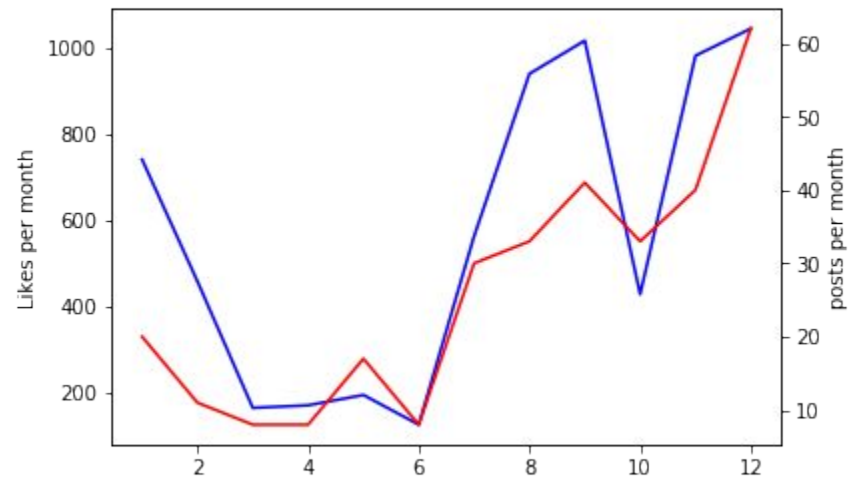


— Count of posts
— Mean/Sum of likes

Count of posts vs Mean of likes



Count of posts vs Sum of likes



— Count of posts
— Mean/Sum of likes

Recommendations:

- Focus on your activity on Mondays and not on Fridays
- Keep the activity up also in January and February and not only on December

Github: https://github.com/dssg-berlin/fb_tafel_discoveries