SWAnalytics

Group 25

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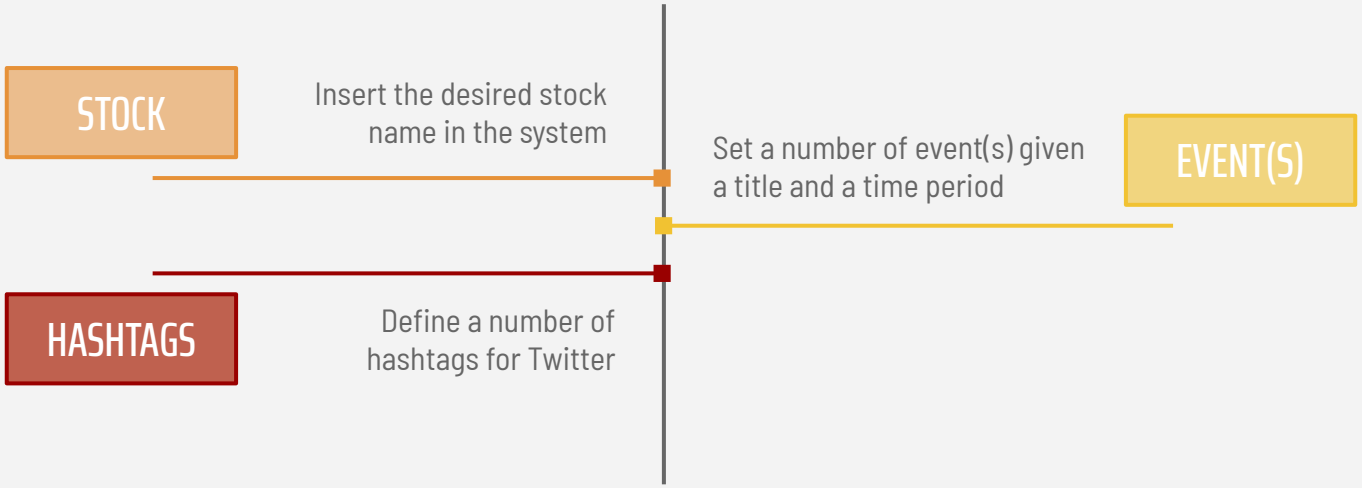
RESEARCH

- What is the impact that a certain brand-related event has on the brand itself in terms of consumers' opinions and which is the correlation between these latter and the stock prices?

- How can investors investigate whether the public opinion affects a company that they are interested to invest in?

WEB-BASED ANALYTICS TOOL

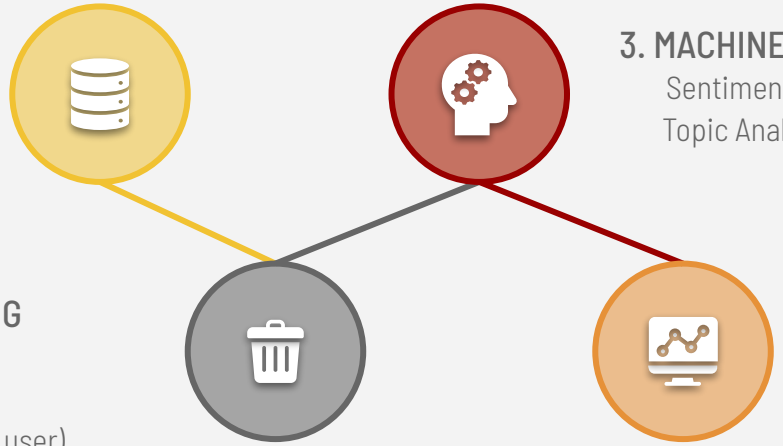
INPUT


STOCK
Insert the desired stock name in the system
HASHTAGS
Define a number of hashtags for Twitter
Set a number of event(s) given a title and a time period
EVENT(S)

PIPELINE

1. DATA GATHERING
Twitter data
Stock prices

2. DATA CLEANING
No location
Unknown location
Duplicate tweets (same user)



3. MACHINE LEARNING
Sentiment Analysis
Topic Analysis (LDA)

4. ANALYTICS APP
Interactive graphs

APP STRUCTURE

00

OVERALL STATISTICS

01

CORRELATION

02

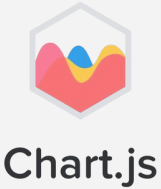
GLOBAL SENTIMENTS

03

TOPIC ANALYSIS

TECHNOLOGIES

FRONTEND



BACKEND

CONTAINER

SERVER

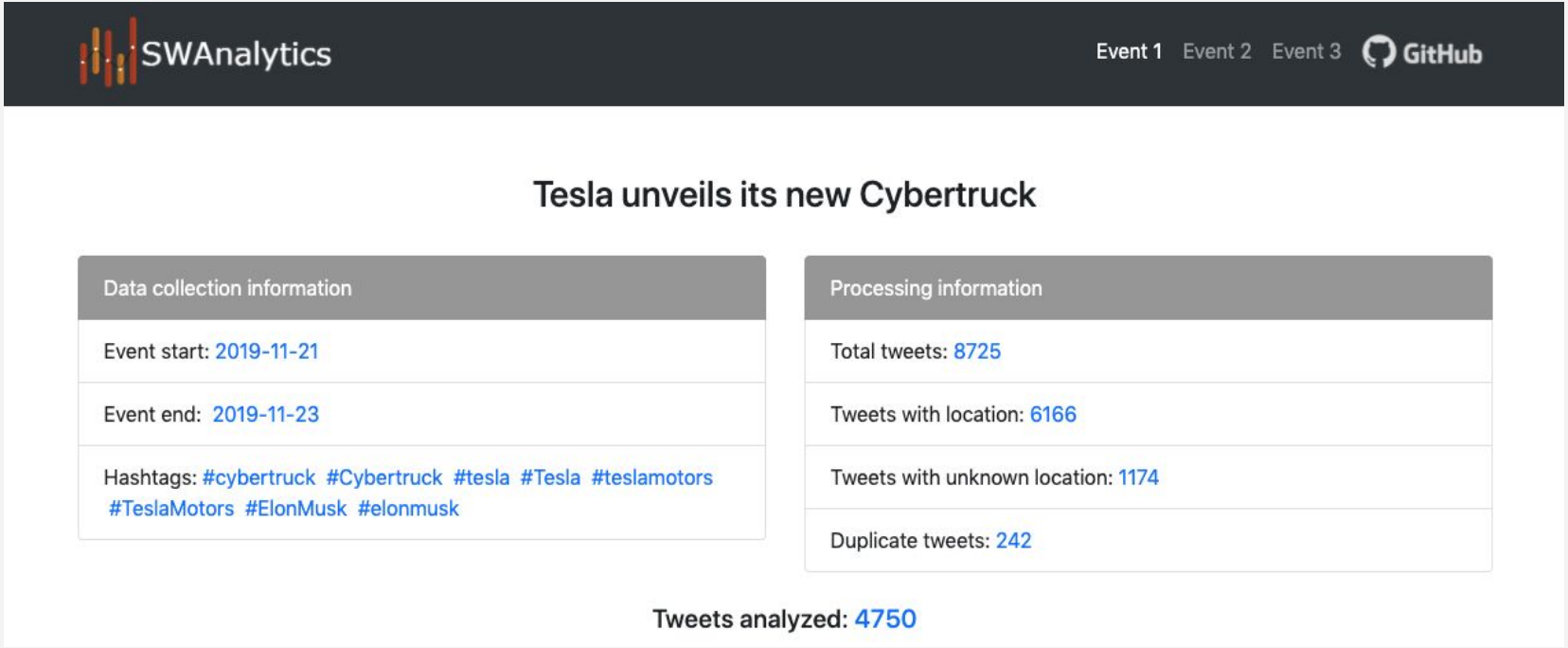
USE CASE

- **Unveils its new Cybertruck**
- Highest stock price till date of $962.86
- Worst day of the year after brutal earnings report and loss of CTO

00 OVERALL STATISTICS

Data collection and processing information

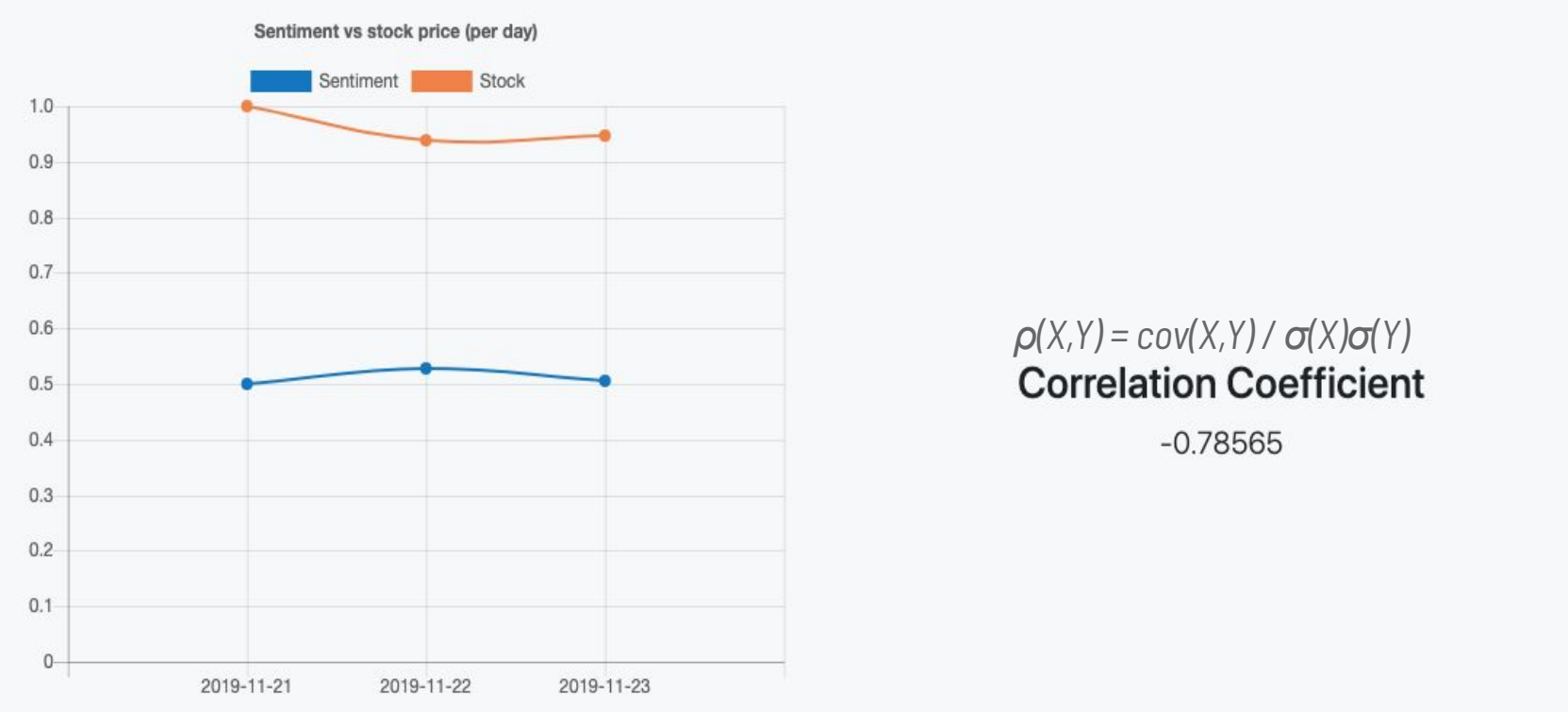
OVERALL STATISTICS



CORRELATION 01

Compare the trends of stock prices and users' sentiments

CORRELATION

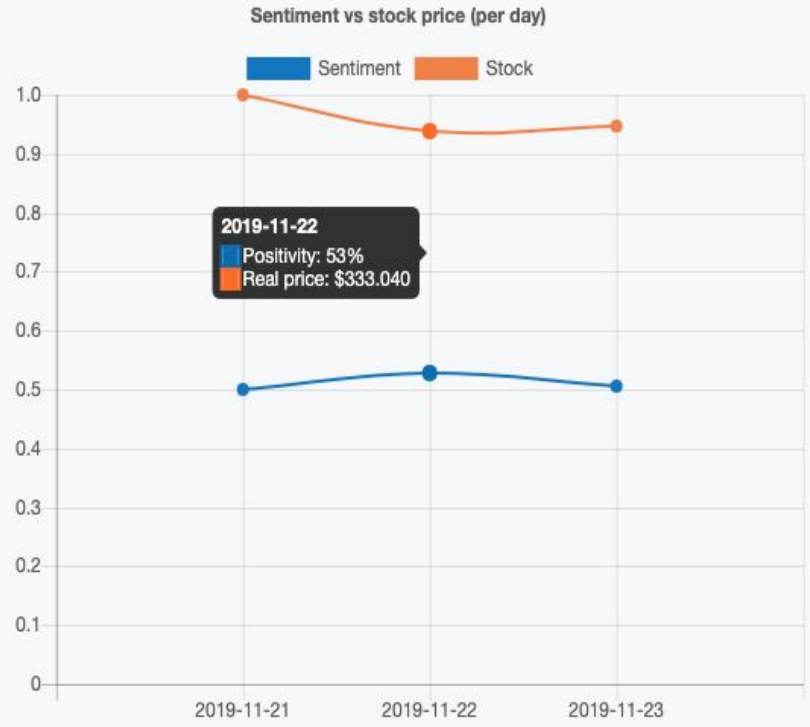


$\rho(X,Y) = cov(X,Y) / \sigma(X)\sigma(Y)$

Correlation Coefficient

-0.78565

CORRELATION



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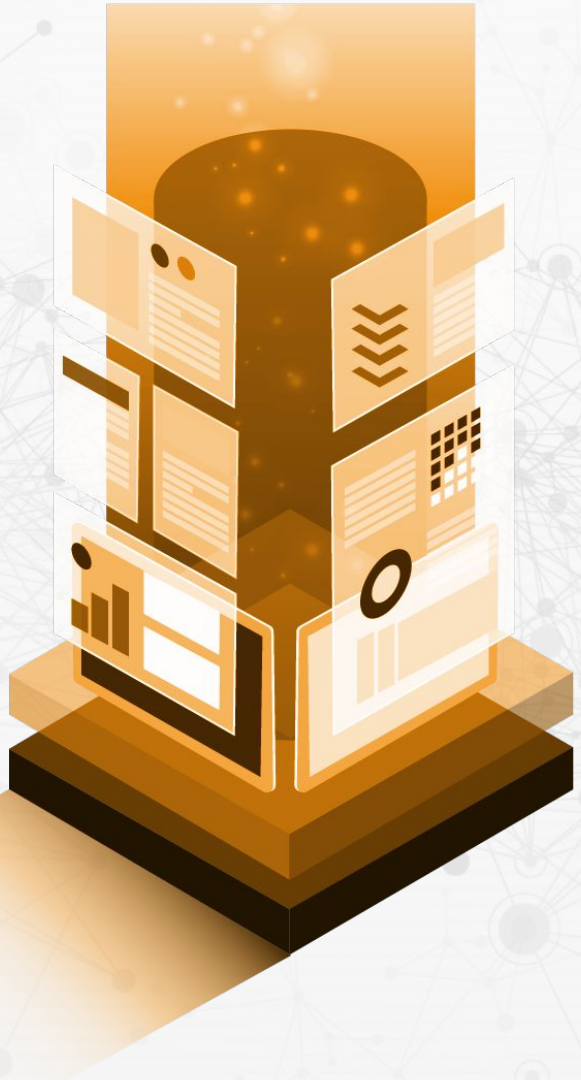
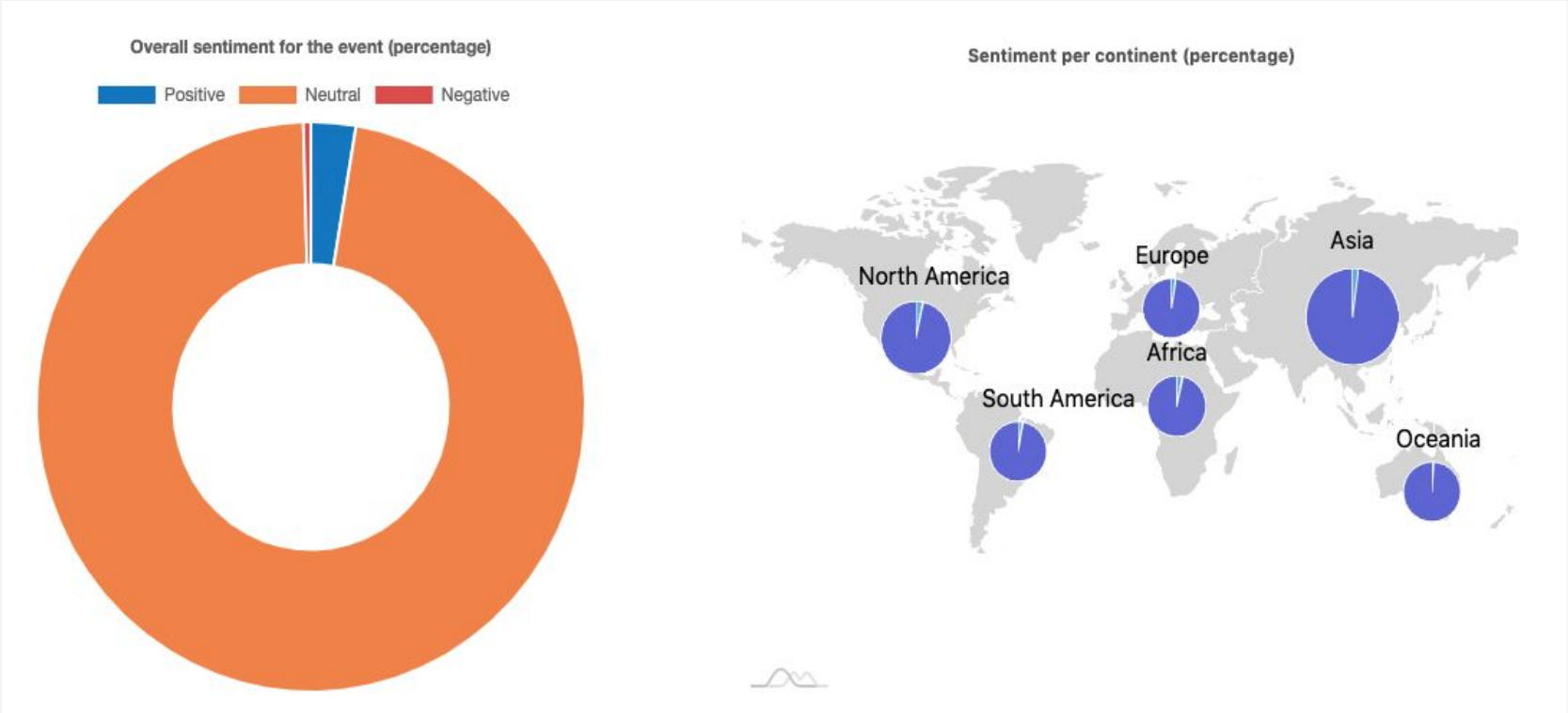
02

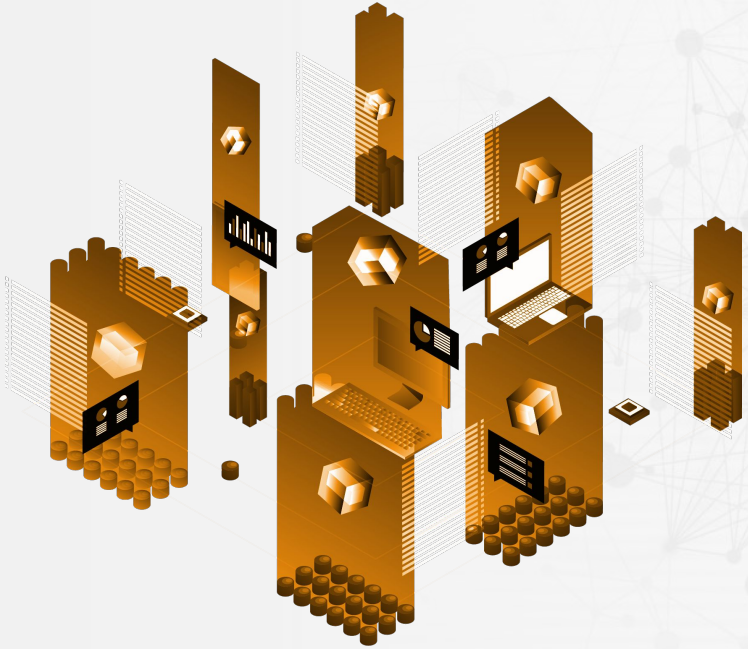
GLOBAL SENTIMENTS

Distribution of the
sentiments across the world



GLOBAL SENTIMENTS

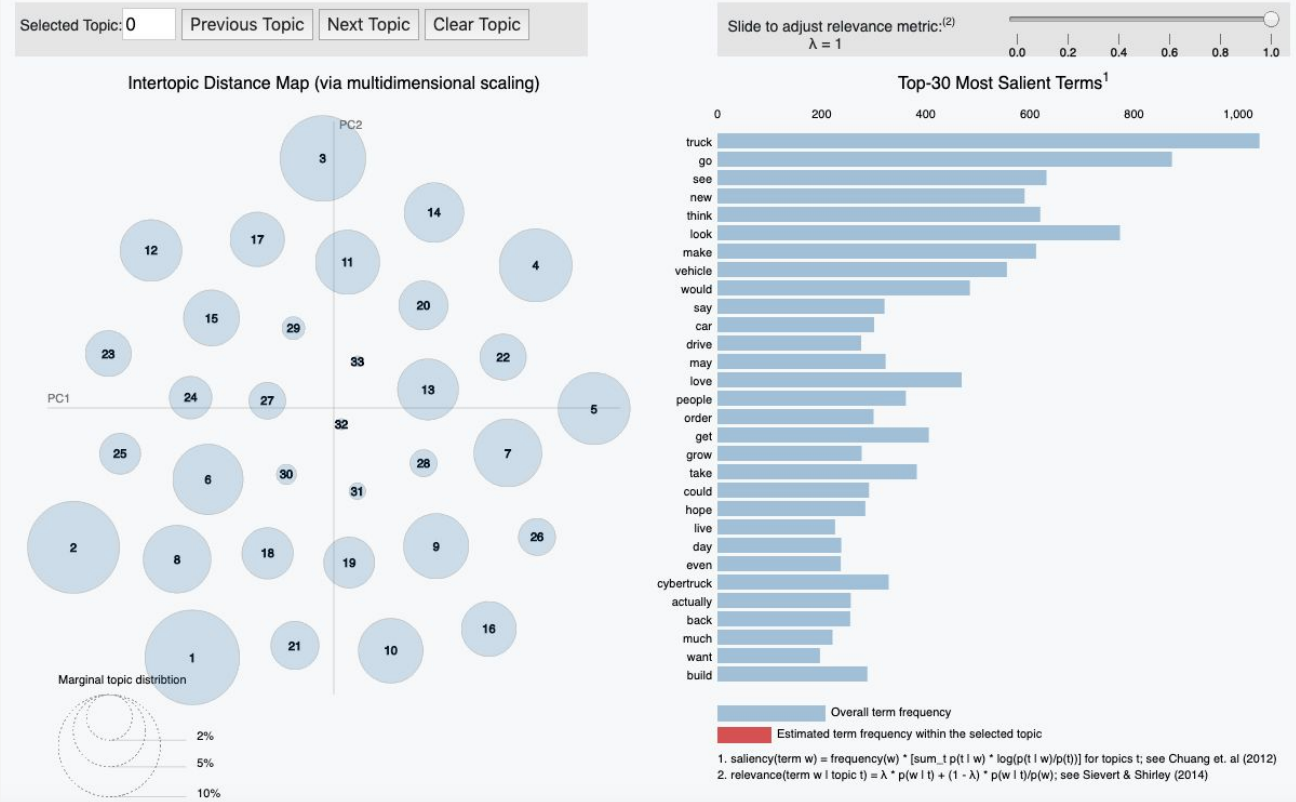




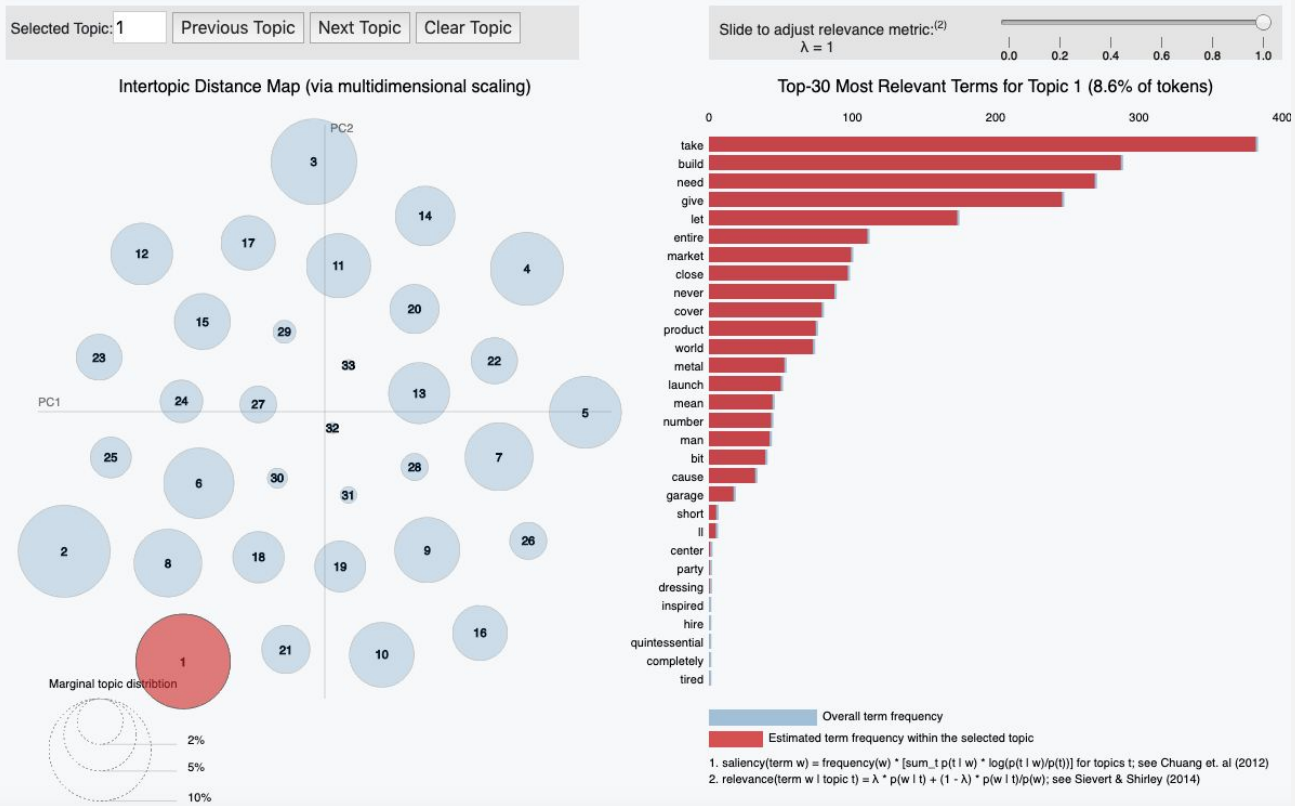
TOPIC ANALYSIS 03

Visualizations on most relevant topics

TOPIC ANALYSIS



TOPIC ANALYSIS



THANKS

Try it out at: https://thzois.com/swanalytics

GitHub https://github.com/thzois/sw_2020