SNAP4CITY

Social Media Analysis: Twitter Vigilance

Twitter Information Channels Monitoring daily and in real time

Assessing reputation

Predicting audience

Assessing appreciation

Due to their popularity and rapid propagation capability, social media have become important communication channels on public opinions on real world events. Multiple organizations and governments recognize the importance of social media as public opinion sensing tools that can be used to monitor **special events** like natural hazards such as earthquakes, landslides, floods, storms to develop **early warning systems**, but also via **monitoring** the total volume of tweets on particular events could be used to predict **presences** at for example special cultural events.

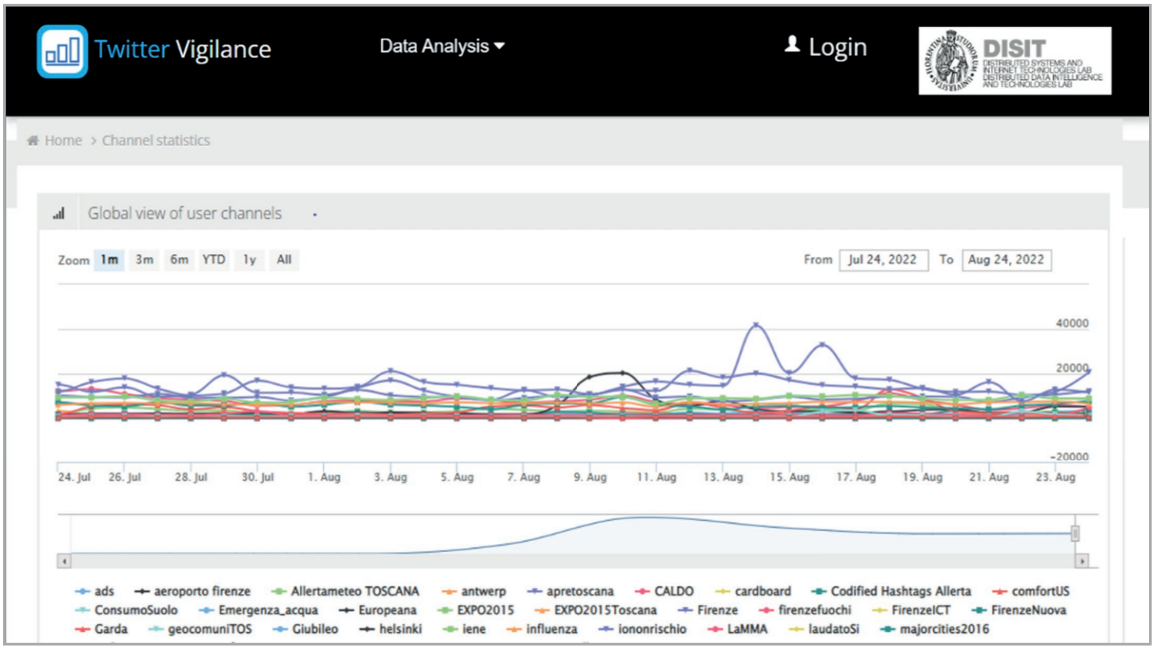
The Twitter Vigilance tool is used also in international projects and challenges to monitor and assess social media impact, reputation in real time. In such cases, the tool is used for monitoring, **evaluating and detecting and assessing**:

- **critical events and conditions**, user opinions of the city's response to events, appreciation of actors and stories,
- reputation of services, proneness of social impact, political assessments,
- Impact of marketing campaigns, advertising impact,
- prediction of number of people, attendees at events, TV shown.

Twitter Vigilance is a multi-user tool for Twitter analysis on which it is possible to monitor simple and complex information channels by combining multiple research keywords. In detail the solution:

- Is based on the definition of ***Twitter Channel*** which consists of a set of simple and complex queries performed on Twitter platform;
- The **simplest** Twitter Channel monitored can control tweets referred to a single hashtag, or to a single keyword. **Complex Channels** consist of tens of complex queries according to Twitter syntax combined with **keywords, hashtags**, etc.;
- ensures the **anlaysis of 98% of tweets/ retweets** referred to events by providing the yield and precision evidence;
- is capable to **monitor** and **analyse** slow and explosive **events** on Twitter with the same efficiency and precision;
- provides adaptive algorithms to allow effectively cope **with slow events** that **become explosive without losses**;
- provides in addition to the Tweets Flow Analysis (volume of tweets/retweets) also **Advanced Artificial Intelligence Natural Language Processing Analysis** providing also the Sentiment Analysis on multiple languages (English, Spanish, French, Italian).

The Twitter Vigilance tool is active since April 2015. Active Channels on Twitter vigilance as hundreds of different scenarios and goals: EXPO, Florence Tourism, pharmacovigilance, Tuscany weather alert, civil protection, and many more.



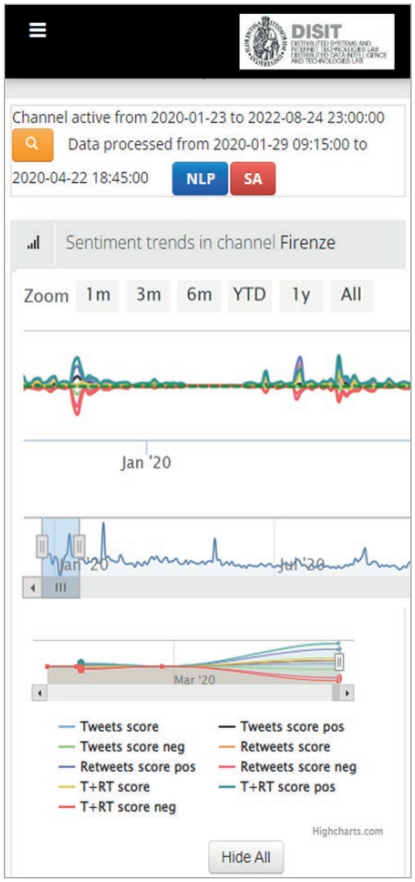
Twitter Channel volume overview

The **Twitter Vigilance** tool can be used to perform analysis for marketing and communication purposes, participatory assessment of citizens, etc., and in particular to:

- discover and evaluate **trends**;
- perform **predictive assessments**, attendance, audience acceptance levels
- **perform competitor analysis** and carry out **evaluations of appreciation** or not of people, products and advertisements,
- detecting emerging trends.

The **Twitter Vigilance** tool performs automated analysis and early warning taking into account, multiple channels, tags, hashtags, and:

- **tweets and retweets;**
- **keywords, verbs, and adjectives**;
- positive/negative impact, known as **sentiment analysis**



Billions of tweets processed in years of activity. Multiple projects, multiple languages

Sentiment Analysis system overview

The solutions adopted are based on the ultimate technologies for **natural language processing, and artificial intelligence as BERT in multilingual: Italia, English, France, Spanish, and Greek.**

Extended version accessible from: https://www.snap4city.org/543
Contact: https://www.snap4city.org
Several papers have been published by DISIT lab about the usage of the tool in several projects such as: REPLICATE, RESOLUTE, Snap4City, Herit-Data, etc.