Twitteranalyser User Documentation

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# Terms and meanings

In this section, important terms and what they mean in the context of the application are discussed.

|  |  |
| --- | --- |
| Term | Meaning |
| Event | a single, real world event which can be searched for by one or more tags, and for which an analysis of sentiments is desired |
| Twitter-Tweet | a single tweet of some person, with the message text as main property |
| Sentiment-Analysis | analysis of sentiments present in tweets (based on word comparisons) |
| Filter | A view configured to filter the amount of tweets shown for a specific event (only showing the tweets that match the filter properties) |

# Versions

|  |  |  |
| --- | --- | --- |
| Version | Date of publish | Author |
| Sprint 1 | 9.4.2014 | Max Kesselbacher |
| Sprint 2 | 30.4.2014 | Max Kesselbacher |
| Sprint 3 | 14.5.2014 | Max Kesselbacher |

# Overview

Sentiment Grinder is an application operated through a web GUI which makes it possible to produce an analysis of sentiments for events, based on twitter tweet messages.

Several events can be tracked at the same time – each event is configured with its own set of keywords upon which tweets are gathered, stored and their sentiment is rated.

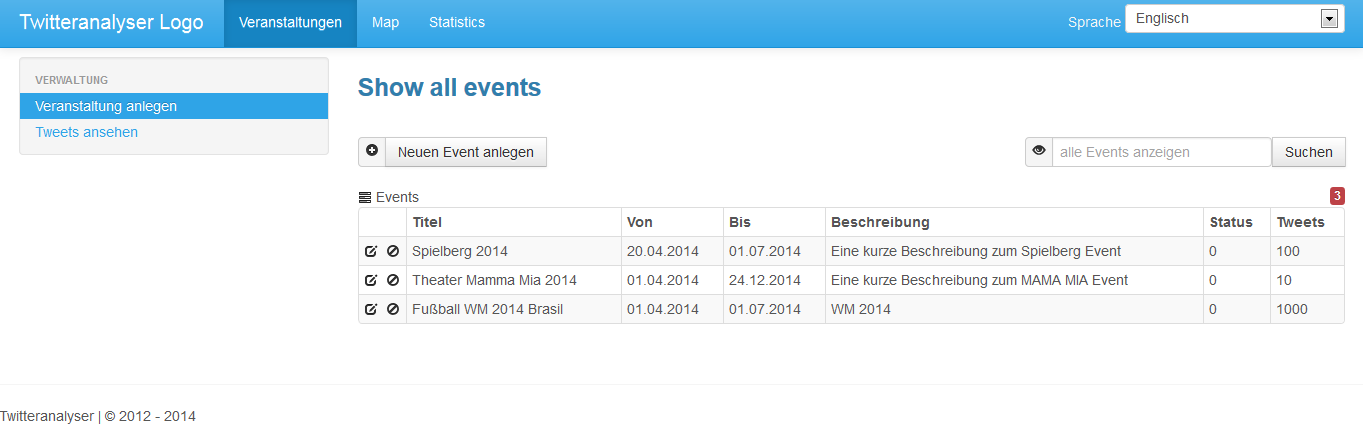
For the stored tweets of an event, the application can perform a sentiment analysis based on counting and weighting the positive and negative connotated words in the tweet messages to produce a graphical overview and a time trend of the sentiments present in the twitter messages.

The gathered tweets and the sentiment analysis results can also be exported.

# Use of the application

The application is operated through a web GUI. Currently, the newest version of the Mozilla Firefox browser is supported.  
So in order to use the application, the newest version of the Mozilla Firefox browser has to be installed (older versions are not guaranteed to work), and a working network connection to the application main site has to be established. With these requirements met, the application can be properly used. Following is a discussion of the use cases that can be handled by the application.

## The events table view

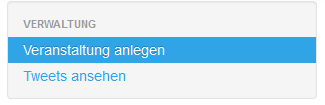
When navigating to the application site in the browser, the main application site is loaded, which consists of a table of already created events and various buttons which are used to maintain this table of events. On initial startup, this table will be empty. When events are configured, the following information is displayed in the table view:

* Name
* From / To dates of data analysis
* Description
* Status of the tweet fetching
* Number of already fetched tweets
* Number of displayed events

The following functions can be performed on this main application site:

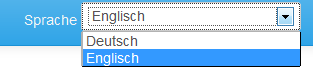
* Adding a new event (with the global “Add Event” button)
* Editing an existing event (with the “Edit” button of the event to be edited), editing also opens the detail view of the event
* Deleting an existing event (with the “Delete” button of the event to be deleted)
* Searching for specific events by names

Switching between the events table and the tweets table can be done by the navigation elements at the left of the site.



Moreover, a dropdown menu to change the working language the GUI is displayed in is already available. Currently, the following languages are supported:

* English
* German



### Adding an event

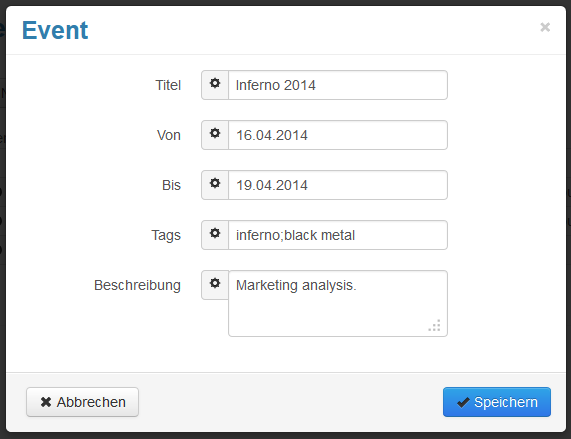
Before the sentiment analysis can be started, a new event has to be added to the system. To accomplish this, the global “Add event” button in the events table view has to be pressed. Upon doing so, a new form will be shown where the information about an event has to be entered. Mandatory information that has to be entered:

* Name of the event
* Description why the event shall be analyzed
* List of tags for which the twitter tweets shall be fetched
* Time frame (from and to date) of the data fetching, only tweets between the two points are fetched and can be analyzed

Optional information that can also be filled:

* Minimum number of tweets that shall be fetched before a notification shall occur (not yet supported)

After entering the required information, the event can be saved and added to the system. As there are not yet any tweets linked to this event, no analysis is possible. The main events table view is loaded, with the newly created event also in the table.



### Editing an event

The properties of existing events that are configured when adding those can later be edited. To accomplish this, the “Edit” button of the corresponding event to be added has to be clicked. Upon doing so, the details view of the event will be loaded. In this view, the configured properties that are currently defined are shown. These properties can be edited and filled with new values. If the new values are valid ones and all mandatory properties are filled, the changes to the event can be saved. If the time frame is changed, possibly new tweets for the event will be fetched.

The details view where the properties of the event can be changed is the same form as for adding an event.

### Deleting an event

When an event is not needed anymore in the system, it can be deleted. To accomplish this, the “Delete” button for the corresponding event to be deleted has to be pressed in the events table view. Upon doing so, a confirmation dialog shows up, requesting confirmation to the deletion of the selected event. When this confirmation is granted, the event will be deleted from the system.

## The tweets table view

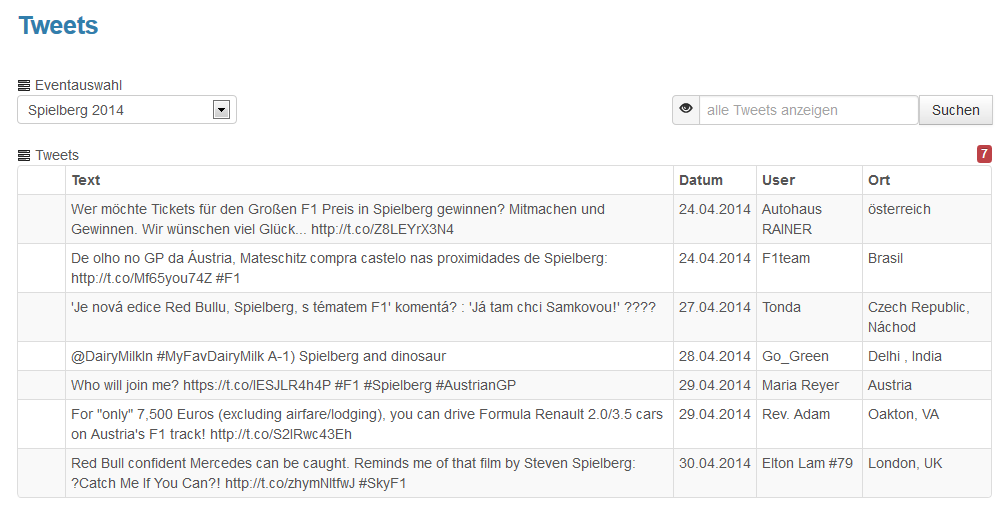
For the created events, tweets are gathered in the background, according to the configured tags of each event and the configured “from” and “until” dates capping the tweet gathering. The fetched tweets can be viewed in the tweets table. This view can be invoked by selecting the “View tweets” navigation element on the left of the screen.

In this table, the following information about tweets is displayed:

* The tweet text message
* The date of the tweet
* The user name of the user that tweeted
* Location (if any) of the tweet
* Number of tweets in this view

Furthermore, the tweets can be filtered by one specific event, selected in a dropdown menu. They can also be filtered by the text input field on the right side of the screen. This text input matches for the tweet text and user name.

\*screenshot to be updated when language files work again\*



With the “Filter” dropdown list, filters to each event can be created, if an event is selected. Initially, no filter is selected and therefore all tweets for the selected event are displayed.

### Filter creation

After selecting an event in the tweets table view, all tweets fetched for the event (with respect to the timeframe configured in the event and the tweet tags) are listed. With the button “Create new filter”, a filter creation and editing form is opened. In this form, the following fields can be entered in this order:

* Text to be matched
* Start date (“From”) of the filter
* End date (“Until”) of the filter
* User name to be matched
* Location to be matched

After filling in the desired properties and clicking “Save”, the filter is saved to the event. It can then be selected with the filters dropdown list, and is applied upon selection. Only tweets matching the filter properties are shown.

\*screenshot of filter adding, when language files work\*

### Filter editing

The existing filters can also be edited in the tweets table view. After selecting an event and one of the already existing filters, the filter properties can be edited with the button “Edit filter”. The filter creation and editing form is opened, where the properties can be altered and saved again. After saving, the updated filter is applied to the tweets of the event (only the tweets matching the filter are shown).

## Sentiment analysis

In the tweets table view, the sentiment analysis which assigns sentiment values to the fetched tweets can be started. First, an event and one of the configured filters (or the standard no-filter) has to be selected. The sentiments analysis is then invoked by clicking the button “Start analysis”.

\*to be documented\*

\*paging to be documented\*