



#allertameteo in tutto il paese, a #Venezia
nuovo picco di acqua alta
askanews.it/cronaca/2019/1...



3:16 PM · Nov 17, 2019 · Twitter Web App

Figure 2: An example of a tweet that is relevant to floods in NE Italy

2 TASK DESCRIPTION

The Flood-related Multimedia Task tackles the analysis of social multimedia from Twitter for flooding events. In this task, the participants receive a set of Twitter posts (tweets) and their associated images, which contain keywords related to floods in a specific area of interest, specifically, the Eastern Alps district in Northeastern (NE) Italy (Fig. 1). However, the relevance of the tweets to actual flooding incidents in that area is ambiguous.

The objective of the task is to build an information retrieval system or a classifier that is able to distinguish whether or not a tweet is relevant to a flooding event in the examined area. An example of a relevant tweet can be seen in Fig. 2. The dataset of the task consists of Italian-language tweets, motivated by the common flood events in the cities of Eastern Alps (e.g., Venice, Vicenza, Trieste, Padua, Pordenone) and surrounding areas. Participants can tackle the task using text features, image features, and a combination of both, and are allowed to submit 5 runs:

- Required run 1: automated, using a fusion of textual and visual data
- Optional run 2: automated, using textual information only
- Optional run 3: automated, using visual information only
- General run 4,5: everything automated allowed, including using data from external sources

3 DATASET DESCRIPTION

The dataset of the task consists of 5,419 Tweet IDs (development-set) and 2,288 Tweet IDs (test-set) that have been collected from Twitter between 2017 and 2019, by searching for Italian flood-related

Table 1: Keywords used in the acquisition of tweets

Italian keywords	Translation
alluvione	flood
alluvione vicenza	flood Vicenza
allagamento	flooding
bacchiglione	Bacchiglione (river)
fiume piena	full river
allerta meteo	weather alert
sottopasso allagato	underpass flooded
allerta meteo vicenza	weather alert Vicenza
esondazione	flood
livello fiume	river level

keywords inside the tweet text. The complete list of keywords can be seen in Table 1. All tweets contain an attached image and had to be still online at the time of releasing the dataset. In order to be compliant with the Twitter Developer Policy, only the IDs of the tweets are distributed to the participants.

The ground truth data of the dataset consists of one class label for the relevancy of each Tweet ID and has been collected with human annotation. Each tweet has been annotated by a single person and the annotators work for the Eastern Alps River Basin District, who are experts on flood risk management in the Eastern Alps district of NE Italy. Apart from the fact that tweets were in their native language, their expertise allowed them to annotate as relevant tweets that referred to specific events, known a priori to them as real, in their district and to other phenomena that may be indirectly related to flooding.

Ground truth is provided to participants only for the development-set as key-value pairs of Tweet ID and ground truth label for the relevancy (0=not relevant/ 1=relevant), where out of the 5,419 tweets 1,140 (21%) are relevant and 4,279 (79%) are not relevant. On the other hand, ground truth for the test-set is not provided to the participants, since it is used in the evaluation.

4 EVALUATION

The official metric for evaluating the correctness of retrieved tweets for the two classes relevant (1) and not relevant (0) is the F1-Score metric on the test set. F1-Score has been selected, because it is defined as the harmonic mean between precision and recall.

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