Incident Streams Track

The focus of the track is to automatically process social media streams during emergency situations with the aim of categorizing information and aid requests made on social media for emergency service operators.

Task

The task is to produce a series of curated feeds containing social media posts, where each feed corresponds to a particular type of information request, aid request, or report containing a particular type of information. The types are defined based on existing hierarchical incident management information ontologies, such as MOAC (Management of a Crisis). The current task(2019-B) is a continuation of the 2019-A task. The task is to classify tweets by information type. In particular, a multi-layer ontology of information types is developed. The nodes in the ontology represent different information types. The task aim is to assign ontology labels (information types) to each tweet within the event stream.
Participants can use the 20k examples from the 2018 edition and 10k examples from the 2019-A edition as training data.

Data

For the track, following events/incidents are selected- wildfire, earthquake, flood, shooting typhoon/hurricane, bombing. There are a stream of tweets for each of the incident, collected using hashtags and keyword monitoring. Each incident stream is to be treated as an independent dataset for purposes of this track. The incidents and streams come from two sources. One is crisislex.org, and the other is collections curated by the organizers representing current events.

Evaluation of Runs

The performance is evaluated by the human assessors manually labelling a subset of the tweets returned within the runs. Currently, all tweets contained within the test events are assessed, although in the future it is expected to move to the pooling updates from each of the runs, prioritizing those with high importance scores, while also diversifying across information categories. To evaluate the performance of participant systems, three groups of metrics are reported: Alerting; Information Feed; and Prioritization.

Approach to the Task

This is a classification problem and deep-learning based NLP approaches like BERT can be used.