Script

WELCOME.

The Earthquake Situational Analytics application includes active components that are able to work with dynamic, streaming data.

The main control panel is built as a stream graph, showing the number of posts related to the selected categories in a time frame. The main categories are Event and Resource.

A sliding window across the stream graph is provided for a specific time frame. This time frame can be expanded from 1 hour to 31 hours by user. The vertical axis shows the number of posts, while the horizontal axis shows the timeline.

For each change in main panel – whether it is choosing another time frame, timestamp or category selection, all other 4 panels are updated dynamically according to main panel.

This is a WordStream, which demonstrates the topic evolution, The WordStream consists of two topics: the keywords within content of messages and location of the message. Thickness of the stream is proportional to number of posts – this is the global trend. Users can also explore the local trend of an individual term and detail of messages.

This panel is a map of St. Himark, in which the color of each neighborhood indicates the number of posts in that area. User can use this map for highlighting corresponding terms in the WordStream and vice versa.

This panel is a network of user interaction for the chosen time frame and the chosen categories. The network demonstrates the connection between users, through the account that are mentioned in content of messages. Via this network, we can spot which one is the account that has important role in the community.

This panel is an account list for ranking content creators. This chart shows the accounts that write the largest number of posts for the chosen time frame and the chosen categories.

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From the main panel with “earthquake” selection, we can spot there are 3 times that the earthquake hit St. Himark. We marked these points to indicate the time period that the earthquake might hit.

To consolidate these points, we explore the WordStream for more detail and evidence. For example. From 2Pm to 3PM, there are 36 messages about earthquake. Especially, at 2:33PM on April 6, at Old Town, they just recorded an earthquake.

Regarding resource, at the second earthquake, around 1:PM April 8, the demand for resources is the highest. Right here, we can see that there is a big demand for water with 286 messgaes. From here we can see the problems is broken water and sewer pipes. We can spot that “contaminated” is emphasized alongside water.

Also, at this point, we can see two consecutive peaks with different internal profiles.

First peak includes high demand for water and transportation. After that, the demand is reduced and then comes with second peak including high demand for food, energy, medical and shelter.

Regarding the community, we can see that “Always Safe Power Company” is an important factor in the network with numerous connections to other accounts. However, the company is not in the top content creators, meaning that there are maybe insufficient response for the matter of power.

The top content creator in this period is DOT-StHimark, with numerous notifications about traffic and closed bridges.