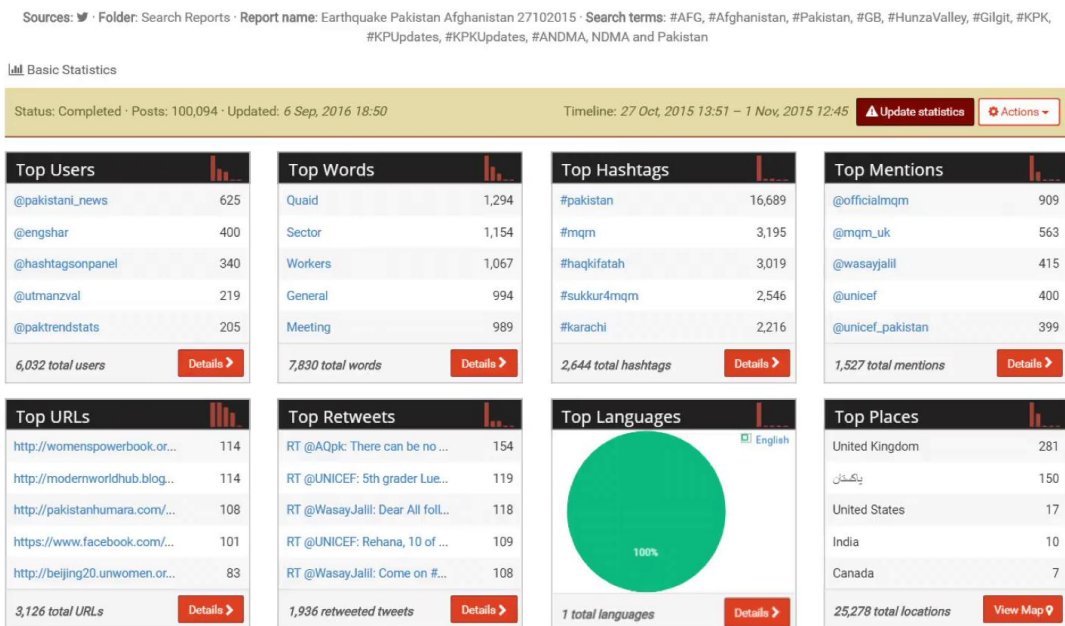


Social media analysis

Basic Statistics

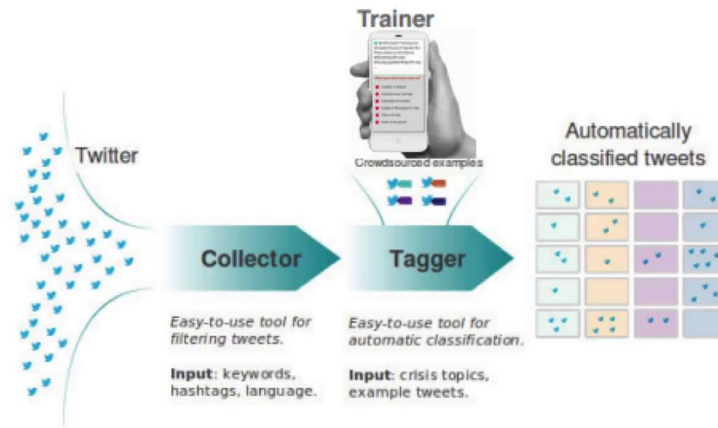


Hi, in this video Mark van den Homberg will explain how social media and artificial intelligence can be used for emergency response. Social media is, in developing countries, on the rise. It's still very important to take into account the penetration of social media. You always have to think about how many people are really using social media. There we can see quite large differences between developing countries. For example, the Philippines is known as the "capital of the selfies," and the "capital of the text messages." But Afghanistan, on the other hand, or Pakistan, there people use social media much less. But still the expectation is that the penetration of very affordable smartphones will really continue, and at a rapid pace. Also people in those countries that do not use social media right now, they will start using it in the future, for sure. So it's good for the humanitarian community to be prepared, and to identify what they can take out of social media. So there is, actually, a lot of expertise already in the area of doing social media analysis.

Notes

Summary





There are different ways to collect tweets from Twitter, or to collect messages from Facebook, and to use artificial intelligence for disaster response, AIDR, to analyze all those tweets, for example.

Notes

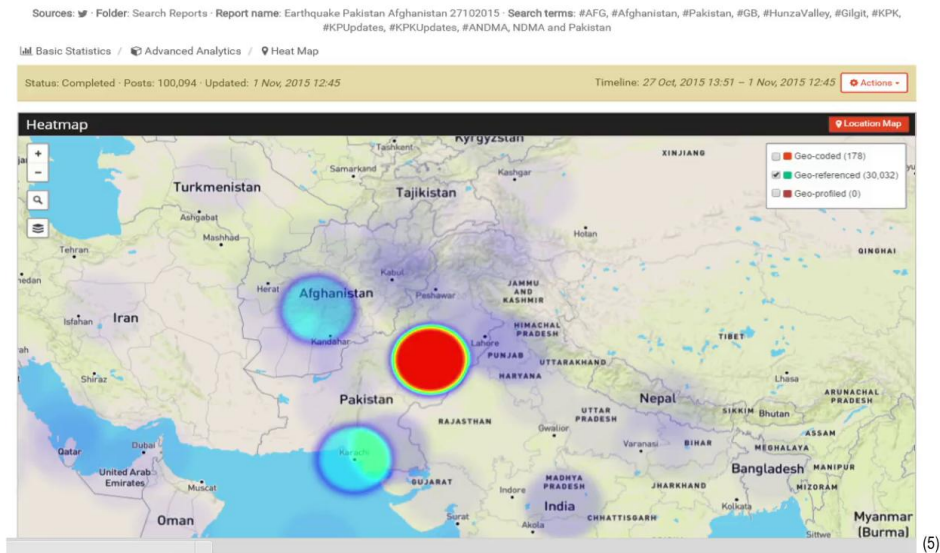
Summary



1m 24s

Social media analysis

SCRAAWL HeatMap of the geo-referenced tweets showing a peak close to Multan due to a non-earthquake related event. (Hindu Kush earthquake 2015)



Artificial intelligence is a very important tool that one can use. And it's actually necessary, because in social media, the volume of data that is created is enormous. And as you can imagine, also in times of a disaster people are not only tweeting or writing on Facebook about the disaster.

Notes

Summary

1m 41s



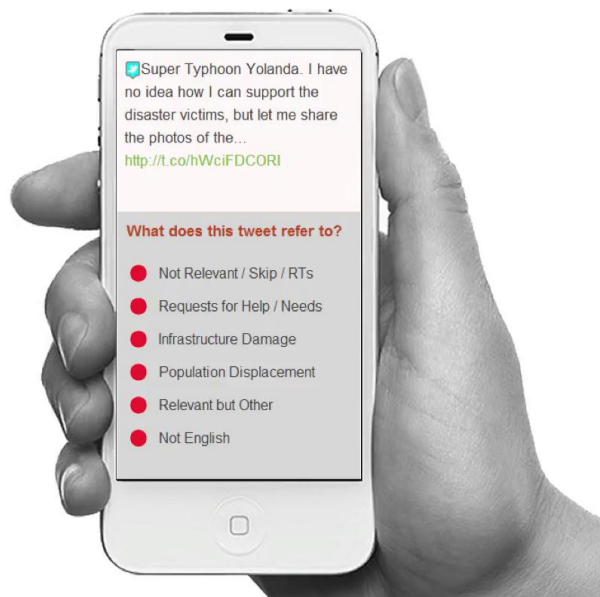
Tweet Clicker: MicroMappers

Tutorial

Completed: 37 out of 1860 Clicks

1823 Clicks remaining!

Rank : New FEMA Recruit



So you will have a haystack of data, of tweets, of postings on Facebook, which is enormous, and it's very hard to identify the needle in the haystack. So it's very important to filter the data, to take out also, for example, botnet data. Botnets are artificial tweet accounts, a kind of robots that are sending, automatically, messages. So you can imagine, we really have to take out that data before you can make sense of it. And artificial intelligence is a way to do so. One can use text mining and data mining to automatically filter out those messages that have no relevance at all to the disaster. But the issue or the difficulty is that there are so many tweets being sent that it is so very hard to find the relevant information. So even with artificial intelligence, it's not possible to completely filter out exactly the information you need, and that actually [led] to the development also of a digital volunteerism movement. We have several organizations where people are active, and that are willing to devote their free time to help with what is sometimes called 'micro mapping', or analyzing tweets at an individual level. And they can help to complement the artificial intelligence part of the analysis.

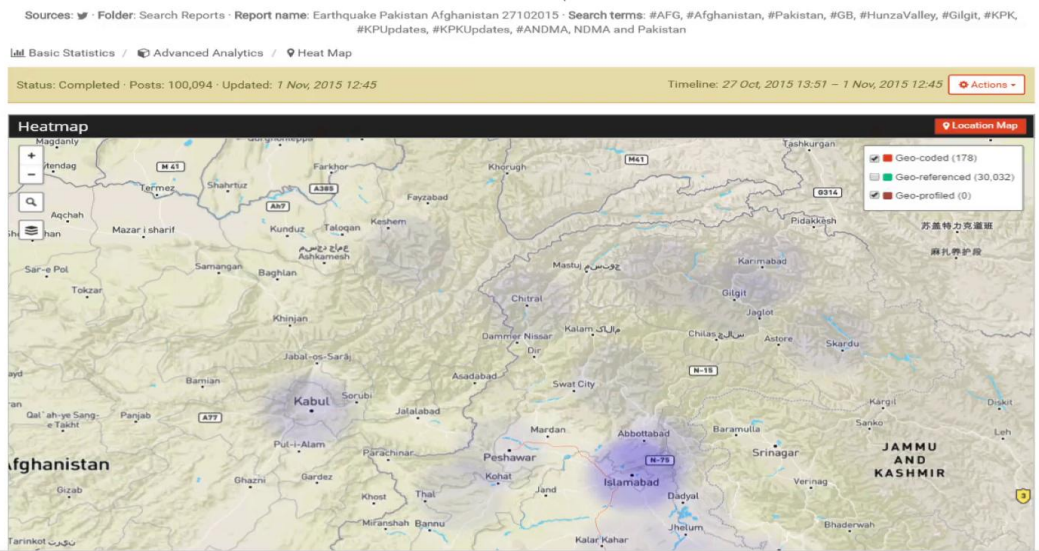
Notes

Summary



2m 05s

SCRAAWL HeatMap of geo-coded tweets showing a very low number of tweets originating from the earthquake affected areas (Hindu Kush earthquake 2015)



It's important to realize that the social media analysis will give you results that should never be considered on its own. It's an add-on to all the other data sources. But the additional value of social media is often that it can be very timely. It's very fast, so it gives you a very quick update about, also, sentiments in a community, whether they are happy about the aid or the responders. And in the case actually of, for example, the earthquake in Haiti, it was also really useful to identify where people were trapped, so really to know where the first response was needed the most. The use of social media-- there are a lot of limitations. One of the limitations is related to the fact that not all people affected by disaster are using social media, of course, and also, on top of that, that we will never have access to all the tweets that are being sent, because, for example, Twitter allows you only to get 1% of the tweets that are being sent through what's called their 'fire hose'. If you want more, you have to pay, you have to have a commercial agreement with them, so often only 1% of the tweets that are being sent are really there to analyze. So if you have 1% of only 8% of a population that is using social media at all, you have, of course, a very small percentage. So that's a first important limitation.

Notes

Summary





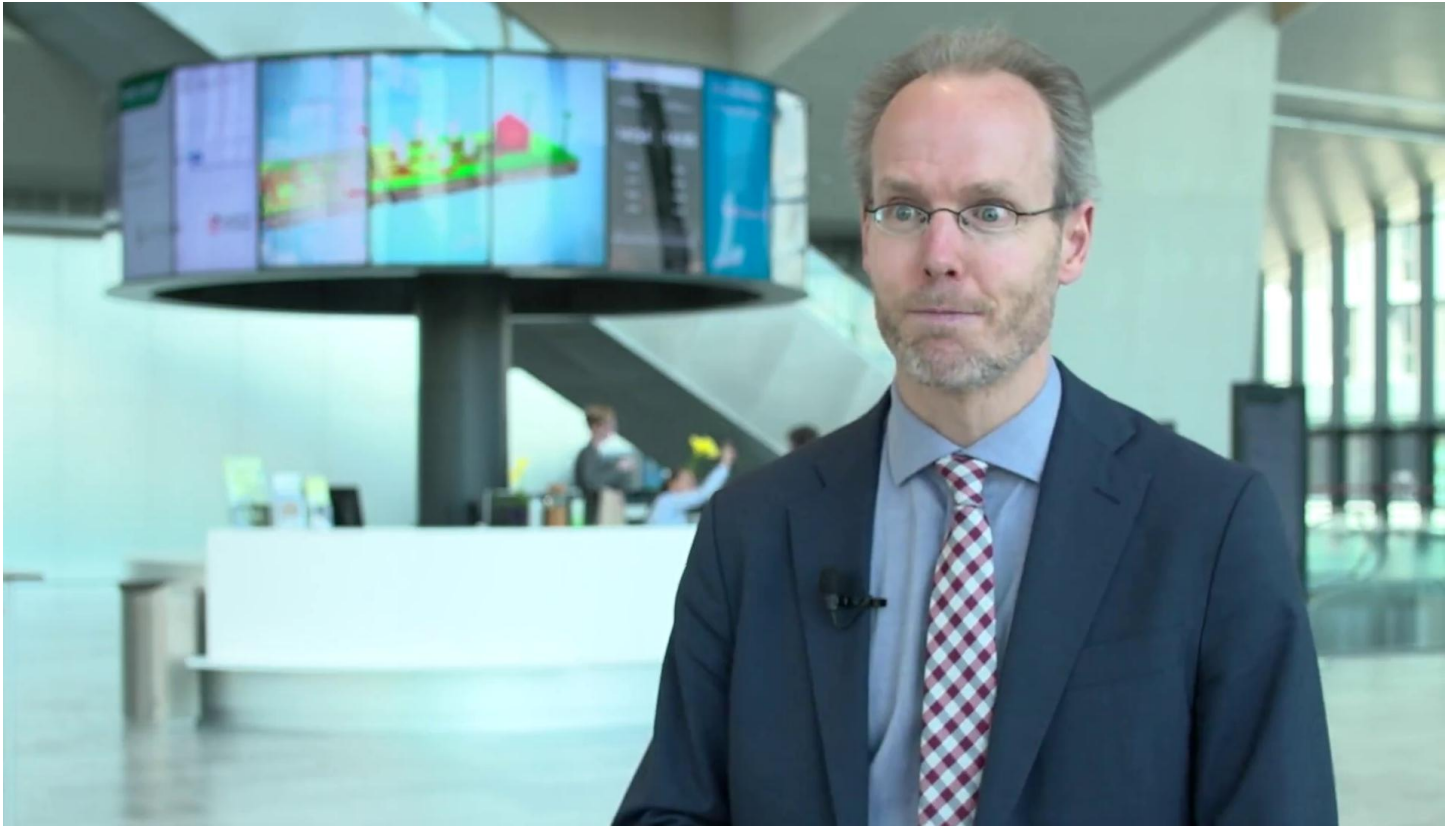
Another limitation is that... that you have to identify the trustworthiness of the people that are using social media. Can you rely on what they are saying? How do you verify and validate what they are saying? So you will need other data sources to validate what people are saying. A third limitation... or well, maybe it's not a limitation, but it's something that you have to be careful about is whether you are dealing with personally identifiable information, what is called PII. If you analyze tweets, you might also enter into the privacy spheres of a person, and if you are analyzing it, and then conveying that information to other different stakeholders, you never know what they can do with it, and especially in complex emergencies or conflict settings, one has to be very careful about what one is doing with social media data. One counter measure is to aggregate the data, and to take out the personally identifiable information, so that's actually also often done, to make sure that you have no identifiable information left after your analysis. It's important to realize that social media is also very dependent on culture, so instead of assuming that everyone will be using Facebook, one really has to think about the local context.

Notes

Summary

5m 19s





For example, in Russia, people are using VK. In China, they have also their own kind of Facebook-type of social media, so it's very important to understand from which target audience you want to have information, and then to make sure that you understand which type of social media the target audience is using. For example, among kids it's now already Snapchat, or new social media which the parents have never heard of, so that's important to check.

Notes

Summary

6m 53s



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Notes

Summary



7m 22s