Module 4 Video 1: Network analysis for digital investigation

[00:00:00] When investigating people and entities online, we are often not only interested in an individual person, but we also need to understand the network they're a part of. A network analysis can really help us with that. So let us look at this visualization of Bellingcats Twitter account and some of its connections.

[00:00:24] I have made it with Mentionmapp, a network visualization tool that allows you to explore relationships between several Twitter accounts and the visualization shows which users and organizations the Bellingcat account has mentioned in its tweets at some point in 2020, if you look at the Bellingcat network, you see as an example that the Bellingcat Twitter account has a strong connection to a user called @trtbc. They're Bellingcat account mentions this user in several of its tweets, for example, in this one. And if you click on the profile of the user, you'll see that Christiaan Triebert has previously worked for Bellingcat and is now working for The New York Times.

[00:01:12] Nevertheless, the connections between him and Bellingcat are still clearly visible in the network visualization. So performing network analysis is a good way to reveal connections between people and entities. And often it is much easier to spot those patterns through visualization. One area where network analysis is specifically helpful is to do investigations into companies.

[00:01:40] Here is a network visualization that shows some of the associates and companies of Erik Prince, the founder and former CEO of Blackwater. It was done with the community version of a tool called Maltego. And to create this, my Bellingcat colleague Russ put together several pieces of information related to the corporate network of friends. When looking at the graph. It becomes very clear why a network analysis is so helpful. You can not only see that Prince is the director of several companies, you can also go a step further and look at the people and businesses his companies are associated with. And this tells me that we should probably look at some of the people in the outer circles of this graph when investigating Prince eventhough there might be no direct connections between them and Prince in the documents that I collected during my research.

[00:02:40] Another recent example that shows how a network visualization can be useful. Are the fincen-files. On the website of the International Consortium of Investigative Journalists, you can look at a network data map, and this map shows information about transactions that have been flagged by financial institutions as suspicious to United States authorities and the network visualization allows us to easily understand how money that is potentially dirty flows from one country to another via U.S. based banks.

[00:03:22] I can look at a specific country here, or I can also click on a specific financial institution. I now click on the Deutsche Bank and I can now see with banks in which countries this institution has had transactions. So this is really, really helpful. And visualizations like this can give you new research leads if you want to find out where the money might be going.

[00:03:48] Another area where network analysis is often applied is social media data. For example, in the context of information campaigns as well as mis and disinformation. As an example, the research, the account of the head of the World Health Organization, because we observed that he was constantly being targeted with memes and all of those memes were very, very similar.

[00:04:15] And through network analysis and visualization, we found that often the same few Twitter accounts were sending out those memes over and over again. And that most likely is some sort of network activity was going on here?

[00:04:30] Network analysis can sometimes also be as simple as collecting a list of creation dates from several Twitter accounts. During the Hong Kong protests in 2019. The leading actress of the movie Mulan, shared a social media post in support of the police. She was criticized for that. And what we found was that many Twitter accounts that retweeted or liked tweets in support of the

Mulan actress were all created on August 16, 2019. By collecting those states in an Excel sheet, we were able to easily visualize and then analyze this natural pattern.

[00:05:10] So a network analysis can be used to discover various patterns of inauthentic behavior in social media datasets. And I encourage you now to watch that case study provided by my colleague Ben Strick.