

Trawling the net to target internet trolls

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A software tool capable of both collecting and then cutting through millions of online messages to identify radicalising groups, trolls, and cyberbullies has been created by a UK trolling expert and her team at Lancaster University.

The software, known as FireAnt (Filter, Identify, Report, and Export Analysis Tool), can speedily download, devour, and discard large collections of online data leaving relevant and important information for further investigation, all at the touch of a button.

Members of the University's Centre for Corpus Approaches to Social Science (CASS) led by Dr Claire Hardaker have produced this cutting-edge tool so that they can pinpoint offenders on busy social networks such as Twitter.

FireAnt was built as part of an international collaboration with corpus linguist and software expert Laurence Anthony, a professor at Waseda University, Japan and honorary research fellow at CASS.

While initially designed to download and handle data from Twitter, FireAnt can analyse texts from almost any online source, including sites such as Facebook and Google+.

"We have developed a [software tool](#) designed to enhance the signal and suppress the noise in large datasets," explains Dr Hardaker.

"It will allow the ordinary user to download Twitter data for their own

analyses. Once this is collected, FireAnt then becomes an intelligent filter that discards unwanted messages and leaves behind data that can provide all-important answers. The software, which we offer as a free resource for those interested in undertaking linguistic analysis of online data, uses practical filters such as user-name, location, time, and content.

"The filtered information can then be presented as raw data, a time-series graph, a geographical map, or even a visualisation of the network interactions. Users don't need to know any programming to use the tool - everything can be done at the push of a button."

FireAnt is designed to reduce potentially millions of messages down to a sample that contains only what the user wants to see, such as every tweet containing the word 'British', sent in the middle of the night, from users whose bio contains the word 'patriotic'.

Dr Hardaker, a lecturer in forensic corpus linguistics, began an Economic and Social Research Council-funded project researching abusive behaviour on Twitter in December 2013. The project quickly demonstrated that, while tackling anti-social online behaviour is of key importance, sites like Twitter produce data at such high volumes that simply trying to identify relevant messages amongst all the irrelevant ones is a huge challenge in itself.

Less than a year into the project, Dr Hardaker and her team were invited to Twitter's London headquarters to present project findings to the Crown Prosecution Service and Twitter itself. The research subsequently influenced Twitter to update its policy on abusive online behaviour.

The interest from the Crown Prosecution Service and the police encouraged Dr Hardaker to work with fellow corpus linguist, Professor Laurence Anthony to turn the research into a tool that could both collect online data, and then filter out the 'noise' from millions of messages,

thereby enhancing the useful signals that can lead to the identification of accounts, texts, and behaviours of interest.

Dr Hardaker explained that the Government is trying to understand how social networks are involved in issues ranging from child-grooming and human-trafficking to fraud and radicalisation. A key aspect of Dr Hardaker's work is a focus on the process of escalation from online messages that may start out as simply unpleasant or annoying, but that intensify to extreme, illegal behaviours that could even turn into physical, offline violence. In this respect, FireAnt can offer the opportunity to pinpoint high-risk individuals and networks that may go on to be a threat, whether to themselves or others.

Dr Claire Hardaker specialises in research into online aggression, manipulation and deception. She is currently working on projects that involve analysing live online social networks for the escalation of abusive behaviour, and the use of the Internet in transnational crime such as human trafficking and modern slavery.

More information: FireAnt is free to download:
www.laurenceanthony.net/software/fireant

Provided by Lancaster University

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