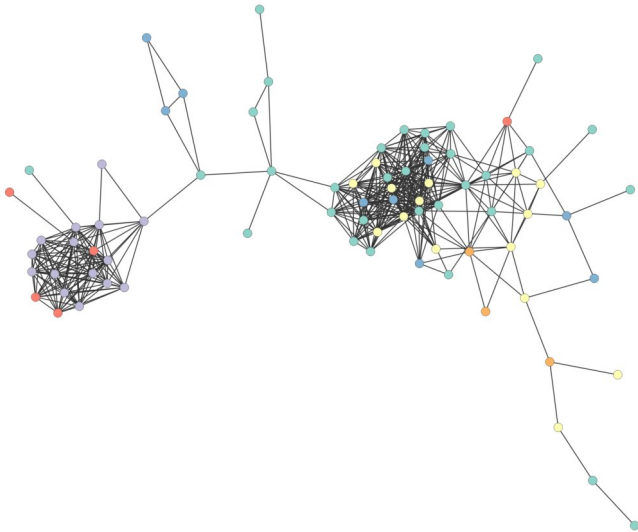


Filtering out social bots can help critical response teams see what's happening in real time

5 December 2019



Credit: Mehwish Nasim

Researchers have created an algorithm that distinguishes between misinformation and genuine conversations on Twitter, by detecting messages churned out by social bots.

Dr. Mehwish Nasim and colleagues at the School of Mathematical Sciences at the University of Adelaide say the algorithm will make it easier for [emergency services](#) to detect major events such as civil unrest, [natural disasters](#), and influenza epidemics in real time.

"When something really big is going on, people tweet a huge amount of useful information," says Mehwish.

"Being able rapidly filter out the polluting inputs of social bots, which churn out multiple messages that distort the human information flow, will help [law enforcement agencies](#), incident response

teams and volunteers to act in a timely manner."

The algorithm works by computing diversity in tweets and temporal coordination.

Bot accounts have less diverse tweets. For instance, they repeatedly use same URLs or hashtags and tweet around the same time.

Mehwish—who is now based at CSIRO's Data61, the data and digital specialist arm of Australia's national science agency—says that by filtering out automated misinformation, agencies will be able to easily access valuable first-hand information by people on the ground during large events.

"For instance," she adds, "minute to minute tweets during the recent NSW and Queensland bushfire emergencies could be extremely valuable for guiding specific fire service responses."

More information: Mehwish Nasim et al. Real-time Detection of Content Polluters in Partially Observable Twitter Networks, *Companion of the The Web Conference 2018 on The Web Conference 2018 - WWW '18* (2018). [DOI: 10.1145/3184558.3191574](https://doi.org/10.1145/3184558.3191574)

Jonathan Tuke et al. Pachinko Prediction: A Bayesian method for event prediction from social media data, *Information Processing & Management* (2019). [DOI: 10.1016/j.ipm.2019.102147](https://doi.org/10.1016/j.ipm.2019.102147)

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