

EU project to build lie detector for social media

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The system could have helped verify online rumours during the London riots.

In our digital age, rumours – both true and false - spread fast, often with far-reaching consequences. An international group of researchers, led by the University of Sheffield, is aiming to build a system that will automatically verify online rumours as they spread around the globe.

Social networks have been used to spread accusations of vote-rigging in Kenyan elections, allege that Barack Obama was Muslim and claim that the animals were set free from London Zoo during the 2011 riots. In all of these cases – and many more – an ability to quickly verify information and track its provenance would enable journalists, governments, emergency services, health agencies and the private sector

to respond more effectively.

Lead researcher, Dr Kalina Bontcheva, from the University of Sheffield's Faculty of Engineering explains: "There was a suggestion after the 2011 riots that social networks should have been shut down, to prevent the rioters using them to organise. But social networks also provide useful information – the problem is that it all happens so fast and we can't quickly sort truth from lies. This makes it difficult to respond to rumours, for example, for the [emergency services](#) to quash a lie in order to keep a situation calm. Our system aims to help with that, by tracking and verifying information in real time."

The EU-funded project aims to classify online rumours into four types: speculation – such as whether interest rates might rise; controversy – as over the MMR vaccine; misinformation, where something untrue is spread unwittingly; and disinformation, where it's done with malicious intent.

The system will also automatically categorise sources to assess their authority, such as news outlets, individual journalists, experts, potential eye witnesses, members of the public or automated 'bots'. It will also look for a history and background, to help spot where Twitter accounts have been created purely to spread [false information](#).

It will search for sources that corroborate or deny the information, and plot how the conversations on social networks evolve, using all of this information to assess whether it is true or false. The results will be displayed to the user in a visual dashboard, to enable them to easily see whether a rumour is taking hold.

Dr Bontcheva adds: "We can already handle many of the challenges involved, such as the sheer volume of information in social networks, the speed at which it appears and the variety of forms, from tweets, to

videos, pictures and blog posts. But it's currently not possible to automatically analyse, in [real time](#), whether a piece of [information](#) is true or false and this is what we've now set out to achieve."

Throughout the project, the system will be evaluated in two real-world domains. For digital journalism, it will be tested by the online arm of the Swiss Broadcasting Corporation, [swissinfo.ch](#). For healthcare, it will be tested by the Institute of Psychiatry at King's College London, where they aim to look at new recreational drugs trending in online discussions and then find out how quickly these feature in patients' medical records and discussions with doctors.

Provided by University of Sheffield

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