Using 'ant colonies' to find fake news

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Although it might be said that there has been malicious writing since our ancestors daubed cave walls with ochre symbols or the very first scribes notched letters into ancient stone tablets, fake news, spam, malicious and threatening words have come to the fore with the advent of our ubiquitous and always-connected digital devices. We might refer to this as "suspicious content."

New work published in the *International Journal of Intelligent Systems Technologies and Applications*, developed an optimization framework for detecting suspicious content in a body of text. The algorithm is built on a biological paradigm—the behavior of an ant colony.

The individual members of an ant colony carry out tasks and use pheromones to communicate with other members of the colony. They can solve rather complex problems together even though the individual ants lack the cognitive skills to do so. In computer science, the way in which individual ants behave, each acting as an agent in a problem "space," can be modeled in an ant colony optimization algorithm (ACO). This probabilistic technique simulates the way in which the colony finds solutions to problems such as finding and transporting food via the shortest and safest route from food source to the colony's food store and many other colony activities. Previously, vehicle and internet routing problems have been solved using ACO, but the same approach can be applied to finding solutions to other problems such as detecting patterns of words in a large text corpus, for instance.

Asha Kumari and Balkishan of the Department of Computer Science and Applications at Maharshi Dayanand University in Rohtak, India, have focused on mobile phone text message content (short messaging service, SMS) and updates on the well-known microblogging social media platform Twitter. Given the ubiquity of these services in everything from entertainment, internet banking, navigation, trading, and other services requiring short messages, it is important to have tools to hand to quickly and accurately detect suspicious content.

More information: Asha Kumari et al. An ant colony optimisation-based framework for the detection of suspicious content and profile from text corpus, *International Journal of Intelligent Systems Technologies and Applications* (2021). DOI: 10.1504/IJISTA.2021.114637

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