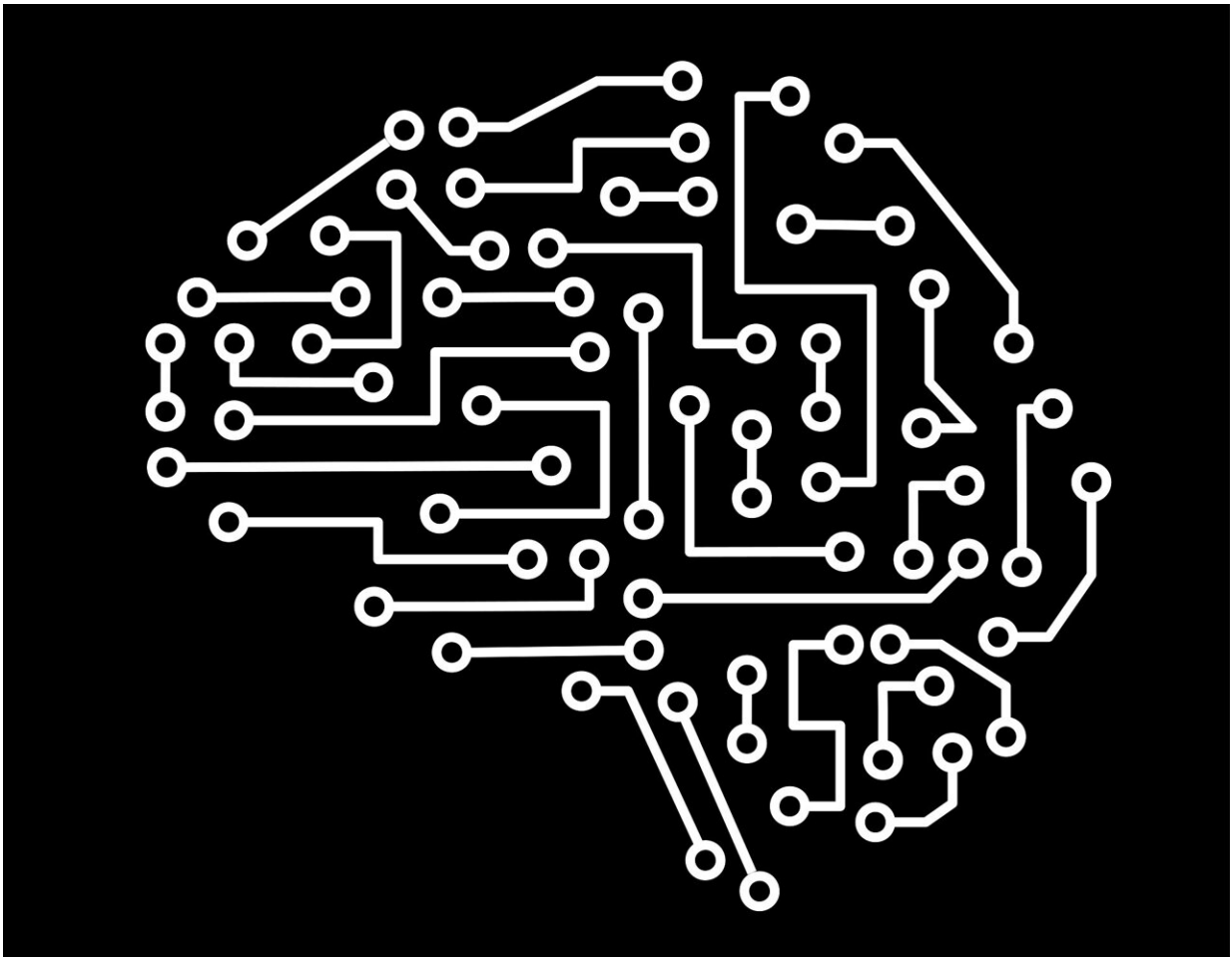# Artificial intelligence answers COVID questions

August 30 2021, by David Bradley

Credit: Pixabay/CC0 Public Domain

A chatbot that is based on an artificial neural network that can carry out

natural language processing (NLP) is being developed by researchers in India. The team describes how the chatbot can be programmed to answer questions related to the COVID-19 pandemic. Details are to be found in the *International Journal of Intelligent Engineering Informatics.*

Vishal Tiwari, Lokesh Kumar Verma, Pulkit Sharma, Rachna Jain, and Preeti Nagrath of Bharati Vidyapeeth's College of Engineering in New Delhi, explain that the emergence of a novel coronavirus—SARS-CoV-2—and the ensuing pandemic it caused has led to a lot of concern the world over. The team hopes to allay some of the fears of the unknown aspects of this pandemic by offering people a way to explore knowledge about the disease and the pandemic through a chatbot approach.

The team points out that artificial intelligence (AI) is already playing an important role in fighting the disease but it could also be used to counter misinformation and fill a person's knowledge gaps when issues arise. Current AI technology and one of its talents, NLP, have advanced significantly in recent years not only in terms of the accuracy with which a piece of text might be processed and its meaning extracted, but also in the speed with which it can be done. It is not a decade since an NLP search engine tool might have taken several minutes to process a natural question from a user, but today the technology can extract semantics from a piece of text in less than a second, if not faster.

The team points out that that there has been evolution in this area where NLP and neural networks converge. This confluence of AI technologies has taken the science along a different route to the benefit of the systems being developed, it having overcome many of the problems that the original approaches had encountered in so doing.

The application of this new and rapidly evolving technology in the current pandemic might help slow the spread of misinformation among

laypeople confused by mixed messages from the media, activist groups, and social media. Moreover, by offering clear and accurate answers to a person's questions it could lessen the toll on mental health and stress by reducing the information burden. The team adds that the same technology might be extended to the medical realm itself for the detection of symptoms and the provision of information regarding the spread of disease and how to reduce the risk of infection.

More information: Vishal Tiwari et al, Neural network and NLP based chatbot for answering COVID-19 queries, *International Journal of Intelligent Engineering Informatics* (2021). [DOI: 10.1504/IJIEI.2021.117059](#)

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