Site Connects Users to Reliable Information About COVID-19

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by Janese Heavin

Looking for reliable information about COVID-19? Want to access articles quickly without having to sort through hundreds of journal articles? You’re in luck. Graduate students at Mizzou Engineering have developed a tool to help you sift through resources fast.

KnowCOVID-19 is a website that allows users to search for specific topics related to the coronavirus. For instance, if you want to know about respiratory illnesses caused by the virus, you can find articles based on that keyword. You can then filter results by the type of article you want.

“Information for COVID-19 is pouring in from everywhere,” said Roland Oruche, one of three students on the research team. “You have different journals giving out tons of important information about the crisis. The problem is there is a massive amount of big data.”

The KnowCOVID-19 site provides access to more than 800 articles, Komal Vekaria said. Papers will be added as new reliable information about COVID-19 becomes available.

The research team is comprised of computer science students who are under the supervision of faculty advisor Prasad Calyam at Mizzou Engineering and Hariharan Regunath, MD, assistant professor of clinical medicine. Vekaria is pursuing a master’s degree, and Oruche is a first-year PhD student. They built upon the research of PhD student Yuanxun Zhang, who worked with Calyam on a related publication.

Articles Filtered by Category

IBM launched a similar COVID-19 tool earlier this spring. What makes the Mizzou project unique is the fact that users can filter articles based on the type of source, Oruche said.
Regunath suggested the team categorize each paper based on the Levels of Evidence Pyramid. That pyramid is a hierarchal system that scientists and evidence-based health care providers use to classify studies. For instance, expert opinions make up the lowest tier. Peer-reviewed randomized controlled trials and systematic reviews, or meta-analysis of these trials, top the pyramid for being the highest quality sources.

“The novelty of our model is that it filters information based on that pyramid,” Oruche said. “We’re using an algorithm that indicates which level of the pyramid each article falls under.”

Next Steps

KnowCOVID-19 is live but a work in progress. Currently, users can search for specific topics by selecting from pre-determined keywords. In the future, visitors will be able to enter their own COVID-19 related keywords.

KnowCOVID-19 has been in the works since April. It’s under the umbrella of MU’s Center for Cyber Education Research and Infrastructure. Calyam is center director and an associate professor of Electrical Engineering and Computer Science.

He hopes the website helps researchers find reliable COVID-19 information needed to advance study of the virus.

“We want to help decision makers find meaningful methods and data sources,” Calyam said. “That will help them fill in knowledge gaps such as prevention, containment and cure. And that will help in the fight against COVID-19.”