

Computer scientists create new search systems to limit COVID-19 misinformation

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Researchers have created a new system that increases the correctness and reliability of health-related searches by 80 percent to help people make better decisions about topics like COVID.

Search engines are the most common tools the public uses to look for facts about COVID-19 and its effect on their [health](#). A proliferation of misinformation can have real consequences, so a team at the University of Waterloo has created a way to make these searches more reliable.

"With so much new [information](#) coming out all the time, it can be challenging for people to know what's true and what isn't," said Ronak Pradeep, a Ph.D. student in the Cheriton School of Computer Science at Waterloo and lead author of a study about the program. "But the consequences of misinformation can be pretty bad, like people going out and buying medicines or using home remedies that can hurt them."

Even the big search engines that host billions of searches every day can't keep up, he said, since there has been so much [scientific data](#) and research on COVID-19 in such a short time.

"Most of the systems are trained on well-curated data, so they don't always know how to differentiate between an article promoting drinking bleach to prevent COVID-19 as opposed to real health information," Pradeep said. "Our goal is to help people see the right articles and get the right information so they can make better decisions in general with things like COVID."

Pradeep says the project aims to refine search programs to promote the best health information for users. He and his research team have leveraged their two-stage neural reranking architecture called mono-duo-T5 for search which they augmented with Vera, a label prediction system trained to discern correct from dubious and incorrect information. The system links with a [search](#) protocol that relies on data from the World Health Organization and verified information as the basis for ranking, promoting and sometimes even excluding online articles.

A recent paper with results from preliminary testing of the system,

"[Vera: prediction techniques for reducing harmful misinformation in consumer health search](#)," with co-authors Pradeep, Xueguang Ma, Rodrigo Nogueira and Jimmy Lin, was recently published in *SIGIR '21: Proceedings of the 44th International ACM SIGIR Conference on Research and Development in Information Retrieval*.

Provided by University of Waterloo

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