Seattle AI lab's free search engine aims to accelerate scientific breakthroughs

31 October 2019, by Melissa Hellmann

Credit: AI2

The Seattle-based Allen Institute for Artificial Intelligence (AI2) is expanding its free search tool Semantic Scholar to include papers in multiple domains such as natural, social, interdisciplinary and social sciences. Semantic Scholar quadrupled its corpus of scientific papers to include more than 175 million papers that range far beyond the project's original fields of computer science and biomedicine.

The search engine uses artificial intelligence (AI) to analyze the similarities and contrasts between scientific papers. Much like the "fans also like" feature in the music-streaming service Spotify, Semantic Scholar suggests other papers related to a user's interest.

The increased access to a multitude of papers will allow the public to easily explore different perspectives on important policy issues, including the impact of climate change and causes of income inequality, Semantic Scholar General Manager Doug Raymond said.

"So much of science today is hard, slow, and it takes a lot of time to find the right papers," Raymond said. "We believe that by continuing our

work in applying artificial intelligence to this problem of information overload to science, we're going to start seeing more and more uses of Semantic Scholar and the acceleration of breakthroughs in multiple domains."

Developed and funded by AI2 in 2015, Semantic Scholar now provides more than 7 million users a month in over 100 countries free access to peer-reviewed science.

Research developed at AI2, including deep learning models, is used in Semantic Scholar to read a paper, as well as identify the underlying concepts and citations to show its influence on the scientific community. The key findings then are presented to the user in a concise summary that saves researchers what could otherwise take months of reading and compiling results.

"Semantic Scholar is not only a great resource to locate research papers, but more so an active analysis and approach to research knowledge providing new insights," wrote user Isaac, a genomics researcher at Memorial Sloan Kettering Cancer Center, in an email to the customer-support portal. "When looking into research topics, I often use Semantic Scholar to find the key researchers in the field, and through their networks to explore and understand how the research problem have been addressed, in order to evaluate and position my research."

Semantic Scholar also unveiled its inclusion of 20 million open access papers that ensure users never hit a paywall when researching a topic. An analysis of the search engine's own corpus of papers revealed that free peer-reviewed studies receive nearly double the citations that papers behind a paywall obtain after the first year of publication.

The increased access to scientific knowledge follows the initial vision of late founder Paul Allen, Raymond said. "Paul's vision was that potentially a

cure for cancer might exist within the research, if
only we could uncover the right research with the
right tools, which is what Semantic Scholar is trying
to do."

APA citation: Seattle AI lab's free search engine aims to accelerate scientific breakthroughs (2019,
October 31) retrieved 27 November 2021 from https://techxplore.com/news/2019-10-seattle-ai-lab-free-aims.html