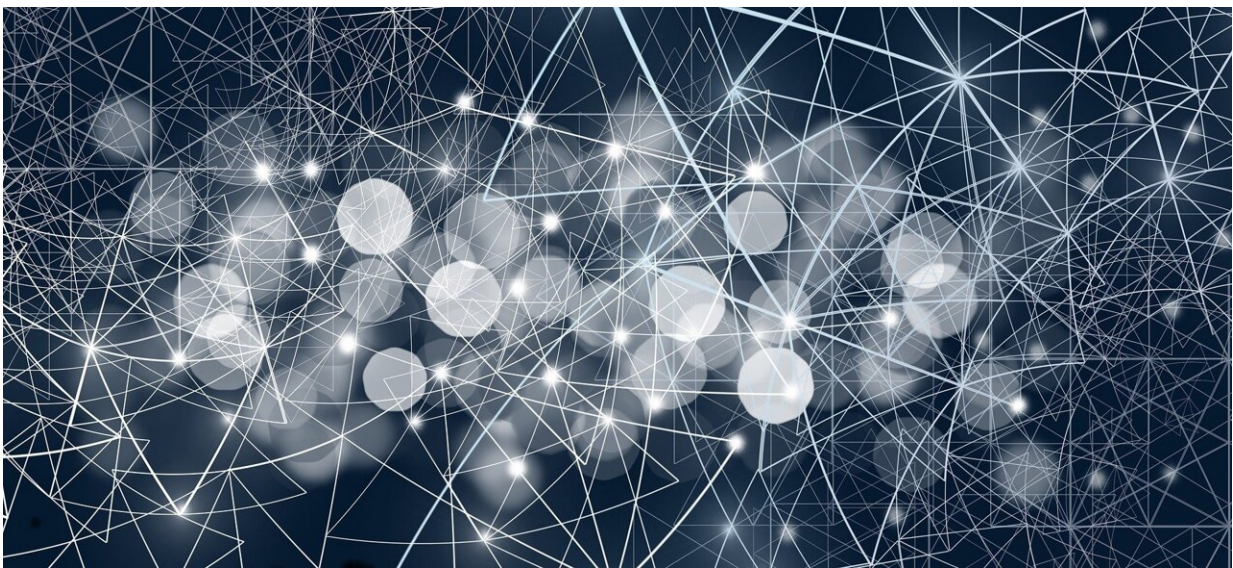


New database features 250 AI tools that can enhance social science research

June 7 2024, by Megan Stubbs-Richardson, Devon Brenner, Lauren Etheredge and MacKenzie Paul



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AI—or artificial intelligence—is often used as a way to summarize data and improve writing. But AI tools also represent a powerful and efficient way to analyze large amounts of text to search for patterns. In addition, AI tools can assist with developing research products that can be shared widely.

It's with that in mind that [we](#), as researchers in [social science](#), developed

a new [database of AI tools for the field](#). In the [database](#), we compiled information about each tool and documented whether it was useful for literature reviews, data collection and analyses, or research dissemination. We also provided information on the costs, logins and plug-in extensions available for each tool.

When asked about their perceptions of AI, many social scientists express caution or apprehension. In a sample of faculty and students from over 600 institutions, only [22% of university faculty reported that they regularly used AI tools](#).

From combing through lengthy transcripts or text-based data to writing literature reviews and sharing results, we believe AI can help [social science](#) researchers—such as those in psychology, sociology and communication—as well as others get the most out of their data and present it to a wider audience.

Analyze text using AI

Qualitative research often involves poring over transcripts or written language to identify themes and patterns. While this kind of research is powerful, it is also labor-intensive. The [power of AI platforms to sift through large datasets](#) not only saves researchers time, but it can also help them analyze data that couldn't have been analyzed previously because of the size of the dataset.

Specifically, AI can assist social scientists by [identifying potential themes](#) or common topics in large, text-based data that scientists can interrogate using qualitative research methods. For example, AI can analyze 15 million social media posts to identify themes in how people coped with COVID-19. These themes can then give researchers insight into larger trends in the data, allowing us to refine criteria for a more in-depth, qualitative analysis.

AI tools can also be used to adapt language and scientists' word choice in research designs. In particular, AI can reduce bias [by improving the wording of questions](#) in surveys or [refining keywords](#) used in social media data collection.

Identify gaps in knowledge

Another key task in research is to scan the field for previous work to identify gaps in knowledge. AI applications are built on [systems that can synthesize text](#). This makes literature reviews—the section of a research paper that summarizes other research on the same topic—and writing processes more efficient.

Research shows that human feedback to AI, such as providing examples of simple logic, can significantly improve the tools' [ability to perform complex reasoning](#). With this in mind, we can continually revise our instructions to AI and refine its ability to pull relevant literature.

However, social scientists must be wary of fake sources—a [big concern with generative AI](#). It is essential to verify any sources AI tools provide to ensure they come from peer-reviewed journals.

Share research findings

AI tools can quickly summarize research findings in a reader-friendly way by assisting with writing blogs, creating infographics and producing presentation slides and even images.

Our database contains AI tools that can also help scientists present their findings on social media. One tool worth highlighting is [BlogTweet](#). This free AI tool allows users to copy and paste text from an article like this one to generate tweet threads and start conversations.

Be aware of the cost of AI tools

Two-thirds of the tools in the database cost money. While our primary objective was to identify the most useful tools for social scientists, we also sought to identify open-source tools and curated a list of 85 free tools that can support literature reviews, writing, data collection, analysis and visualization efforts.

In our analysis of the cost of AI tools, we also found that many offer "freemium" access to tools. This means you can explore a free version of the product. More advanced versions of the tool are available through the purchase of tokens or subscription plans.

For some tools, costs can be somewhat hidden or unexpected. For instance, a tool that seems [open source](#) on the surface may actually have rate limits, and users may find that they've run out of free questions to ask the AI.

The future of the database

Since the release of the [Artificial Intelligence Applications for Social Science Research Database](#) on Oct. 5, 2023, it has been downloaded over 400 times across 49 countries. In the database, we found 131 AI tools useful for literature reviews, summaries or writing. As many as 146 AI tools are useful for [data collection](#) or analysis, and 108 are useful for research dissemination.

We continue to update the database and hope that it can aid academic communities in their exploration of AI and generate new conversations. The more that social scientists use the database, the more they can work toward consensus of adopting [ethical approaches to using AI](#) in research and analysis.

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