

Online search is changing, so must digital skills

AI-generated prefab answers and questions about ad-supported content are raising red flags about the level of critical discernment needed and the atrophy of existing skills in this new environment



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As I peered into the dense tropical vegetation, the frightened eyes of a young American soldier met mine. I studied his camouflage gear, blue irises and pale blonde hair, wondering what thoughts lay behind his haunted expression. Clear, vivid and striking, this YouTube video transported me to the Vietnam War as depicted by generative artificial intelligence (AI) images produced in the style of GoPro camera photos.

Of course, lifelike as these images were, I immediately grasped that they were fabricated. The video's GoPro tag was a giveaway that the images were produced by generative AI, since such cameras did not exist in the 1950s to 1970s. The use of an American song as a soundtrack made me realise this video was from the perspective of US and not Vietnamese soldiers.

My ability to recognise the inauthenticity of the video drew on diverse threads of knowledge acquired over the years as an Internet user and media consumer. With generative AI content rapidly proliferating in our media landscape, whether in the form of text, image or video, our digital literacy skills will be sternly tested and have to be systematically stepped up.

As we encounter information

online, we must constantly evaluate its accuracy, veracity, objectivity and applicability. The arrival of ChatGPT takes critical discernment to a whole new level – and raises red flags about the judgment calls to be made.

ChatGPT offers a significant advancement on information retrieval through search engines. As a conversational chatbot that understands natural language questions and responds with natural language answers that efficiently summarise large and diverse swathes of knowledge, ChatGPT has dramatically disrupted how we acquire information from the Internet.

Before its arrival, search engines had been relatively unchanged since their inception as a mass service. The two top search engines, Google and Microsoft Bing (a distant second in terms of market share), largely present search results in the form of hits as brief text extracts from relevant websites, accompanied by hyperlinks.

Users must then undertake a laborious DIY process of deciding which hits to click on, peruse the information on different websites, assess the information by determining its relevance, reliability and provenance. We must review reams of information distributed across multiple windows and attempt to reconcile contradictory or doubtful points. This is a cognitively burdensome task that users certainly do not undertake with equal domain knowledge and digital fluency.

Enter ChatGPT. The friendly conversational tone and convenience of your question answered in neat prose, expressed in a preferred tone of

your choice, has been refreshing and transformative. And indeed, ChatGPT's selling point would be perfect, if not for the fact that it still introduces factual errors, logical inconsistencies or outright fabrications in its output.

DANGER OF ATROPHY OF CRITICAL THINKING SKILLS

This in itself is concerning. But it leads to a new issue: If the holy grail of search engine services is to provide balanced and comprehensible answers easily and seamlessly, how might human skills of processing and assessing information atrophy over time when pre-fab answers to all searches are swiftly generated and neatly delivered?

This is because performing the mental gymnastics of sifting through search hits and weighing the strengths of different sources will be outsourced to AI.

Until the advent of ChatGPT, each online search has been a learning experience in figuring out the efficacy of different search strings and techniques, the universe of online information to wade through, broad patterns underlying who is providing information and for what purposes, and which kinds of information we can reliably trust or must scrutinise. Painful as it is, repeating the search process hones our skills of information retrieval and critical discernment.

This matters when one considers how fraught with difficulty this process of scrutiny already is.

According to online marketing analytics company Moz, the first page of Google search hits attract on average 71 per cent of search traffic clicks, reaching as much as 92 per cent in recent years. Second-page results trail far behind at under 6 per cent of all website clicks. Such data indicates consumer proclivity towards simplification and optimisation, reflecting the

sizeable mental load that online searches impose on us. In an increasingly complex and confusing world buckling under information overload, the desire for straightforward answers is naturally intuitive and fierce.

Differences in digital skills can also make the search process much more onerous for those who are technically less well-equipped. A more tech-savvy user will be able to corroborate information on websites by checking other online services, including proprietary digital sources from online libraries, or going to online communities such as Reddit or Discord to seek feedback from topically focused groups.

Now, with the entry of generative AI, digital literacy training must evolve accordingly, sensitising consumers to the strengths and limitations of the conversational AI-driven search and how users should query the chatbots, but interrogate their answers too.

HOW WILL ADVERTS AFFECT AI SEARCHES?

Another key question relates to monetisation. Google and Microsoft will need to derive returns on these souped-up conversational search services. They could either adopt the subscription model, which has been less pursued in search, or go the advertising route that has reaped lucrative gains for Google.

How will the hosting of advertised content influence the information aggregation and curation by conversational search engines? Bing provides hyperlinks to different sources it has referenced in its summarised answers, and Google's Bard does so as well, selectively. How will the incorporation of advertised content be managed in the interests of objectivity, and will such content be prominently flagged so that consumers are aware of the vested interests at play in the text they are presented with?

If the user is less well-schooled in a particular subject, he must rely on markers of quality, such as the authoritativeness of the source of the information. However, more knowledgeable users would be able to identify inadequacies such as errors or biases in the information presented. That could be the case in, say, someone who has to

choose between a range of treatments for a medical procedure.

Ultimately, ChatGPT and many large language models driving generative AI amplify the commonly known issues with search engines: unknown ranking algorithms, profit-at-all-costs monetization models, and other hidden biases.

WATCH OUT FOR A FALSE SENSE OF SECURITY

The prevailing risk of inaccuracies in content produced by conversational AI has yet to be conclusively addressed. The hazard of using conversational AI-powered search services is that even though they are error-prone, they exude tremendous confidence.

Conversational AI-powered search services, including Google Bard and Microsoft Bing, now explicitly highlight to users the possibility of errors. But the likelihood remains that users can be lulled into a false sense of security, thinking they have obtained watertight answers when, in reality, healthy scepticism and instincts for verification should kick in.

No matter how convincing the answers may be, users must still exercise due diligence and verify the answers against alternative sources. And yet, in the light of the variability in knowledge levels and digital skills, we cannot expect all users to be equally motivated or capable of such due diligence.

Just as exciting possibilities are unfolding in the wake of generative AI, so too are the pitfalls. Take the video of the Vietnam War as seen through the lens of GoPro images: Will a student who in 2025 looks up this historical event recognise that this particular video is produced by generative AI and assess it with that understanding? The online search of tomorrow is likely to allow users to choose that search results be presented in a video, a series of images or paragraphs of illustrated text, for example. Preparing consumers for this next frontier is both a critical and urgent imperative.

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