CONCEPTUALISATIONS OF WEB SEARCH

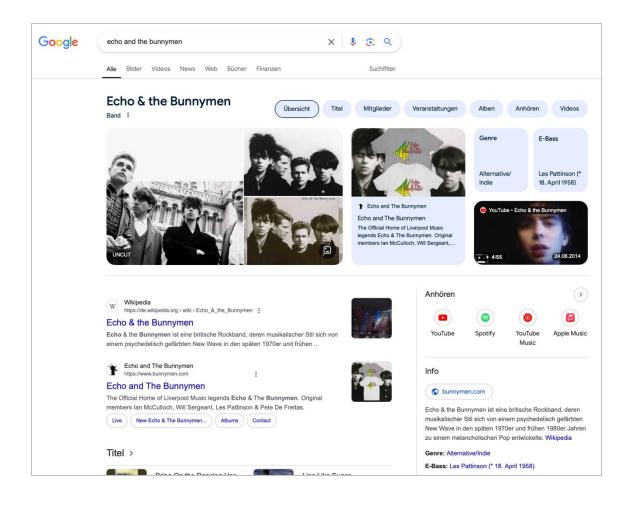
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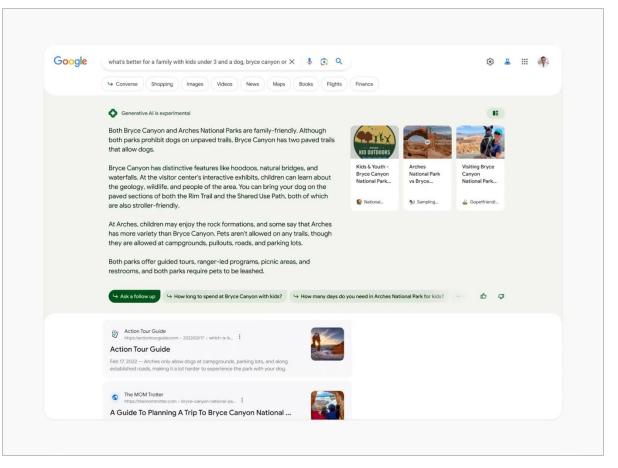
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SEARCH ENGINE RESULT PAGES







TWO TYPES OF RESPONSES

Documents: Information objects shown to help a user answer their question

Generated from an index of documents

Answers: Text that directly answers a user's (anticipated) question

- Key sentence(s) from documents (through information extraction)
- Facts (from specific data sources like Wikidata)
- Al-generated answers (longer, generated from a pre-processed index; LLMs)



TWO QUESTIONS

1. What's the appropriate terminology?

2. What is a search engine?

1. WHAT'S THE APPROPRIATE TERMINOLOGY?

Response

All result/answer types

Result

Document result

Answer

Text generated by the search engine

Search Engine Result Page (SERP)

The page presenting the results: SERP

It makes sense to distinguish between results and answers because they are different and lead to different problems with evaluation, judgment, and information literacy. We see a mix of results and answers in search systems, and this will continue.



2. WHAT IS A SEARCH ENGINE?

Definition (from "Understanding Search Engines")

"A search engine (also: Web search engine; universal search engine) is a computer system that captures distributed content from the World Wide Web via crawling and makes it searchable through a user interface, listing the results in a presentation ordered according to relevance assumed by the system."

Elements not fulfilled in chat-based systems generating answers

- Distributed content from the web? Crawling?
- "Presentation ordered according to relevance assumed by the system" does a SE have to show a ranked list?

Can LLM-generated answers be considered "search results?

- No documents / Answers not directly generated from documents (like direct answers)
- As soon as sources are shown, very similar to "traditional" search results (the answer is just a summary of documents)
- Retrieval-Augmented Generation (RAG) uses a document collection (index) plus an LLM to generate the answers

No problem with "mixed systems" (search engines extended through LLM-generated answers) but with purely chat-based systems

- Information seeking / question answering is only one use case among many
- Is it realistic to have purely chat-based systems vs. "traditional" search engines?

