Google search engine has revolutionized how we can find information online by using the language models BERT and MUM that Google has been training for years to deliver a search engine we all use today for fast and accurate search results by making use of a semantic to break down the query and using the language models to understand the contents meaning thus providing a more precise or relative results, instead of just using simple keyword matching to find results. By comprehending the context and intent behind the search Google is able to deliver more accurate and relevant search results. These language models are typically trained on datasets containing hundreds of gigabytes or terabytes of text data.

The semantic search powered by the language models BERT/MUM improves search relevance. This allows for more accuracy when interpreting the meaning behind the search query leading to more precise results as well as better handling of more complex queries thus reducing the number of irrelevant results. Providing fast and accurate search results increases user satisfaction. (Who doesn't use Google to look up something). While both BERT and MUM are language models, MUM is more advanced in understanding more data formats than BERT for example images (Google Image search).

The search engine breaks down the user query into individual words and phrases that get passed to the language models (BERT/MUM) for Natural Language Processing (NLP). Then it tries to match the results to the most relevant data that the search engine is able to find.

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