

Natural Language Programing

Semantic Search Engine



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What is NLP?



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Natural language processing (NLP) is a branch of artificial intelligence that helps computers understand, interpret and manipulate human language.

NLP makes it possible for computers to read text, hear speech, interpret it, measure sentiment and determine which parts are important.



Semantic Search Engine



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As an example of NLP application, we will talk about Semantic Search Engine, but what is a **Search Engine**?

Search Engine



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Search Engine is to search the World Wide Web in a systemic way for a particular information specified in a textual web query.



Popular Search Engines

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Google



YouTube



amazon.com



facebook

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Semantic search denotes search with meaning, as distinguished from **lexical search** where the search engine looks for literal matches of the query words or variants of them, without understanding the overall meaning of the query.



Semantic Search Engine Steps

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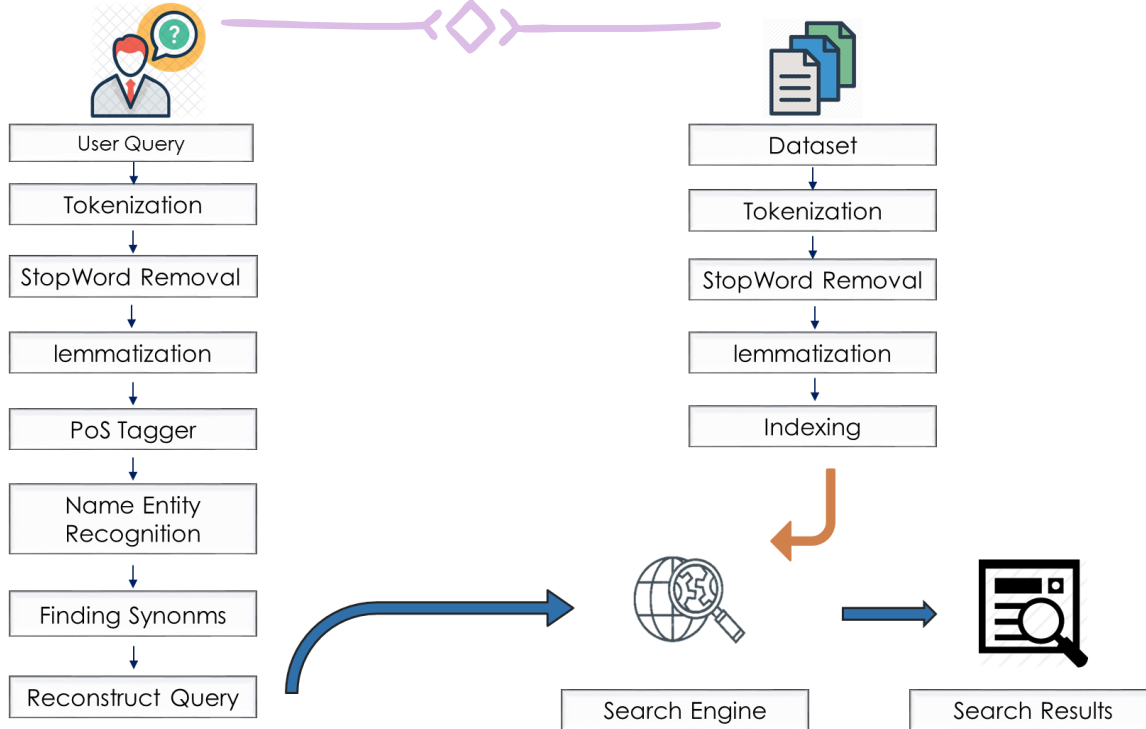
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Java Language was used through the IDE: NetBeans.

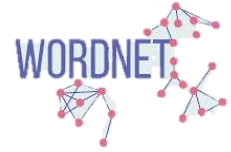


Lucene Library for Indexing.



CoreNLP

Stanford coreNLP for linguistic processing.



WordNet library for finding synonyms.

Results

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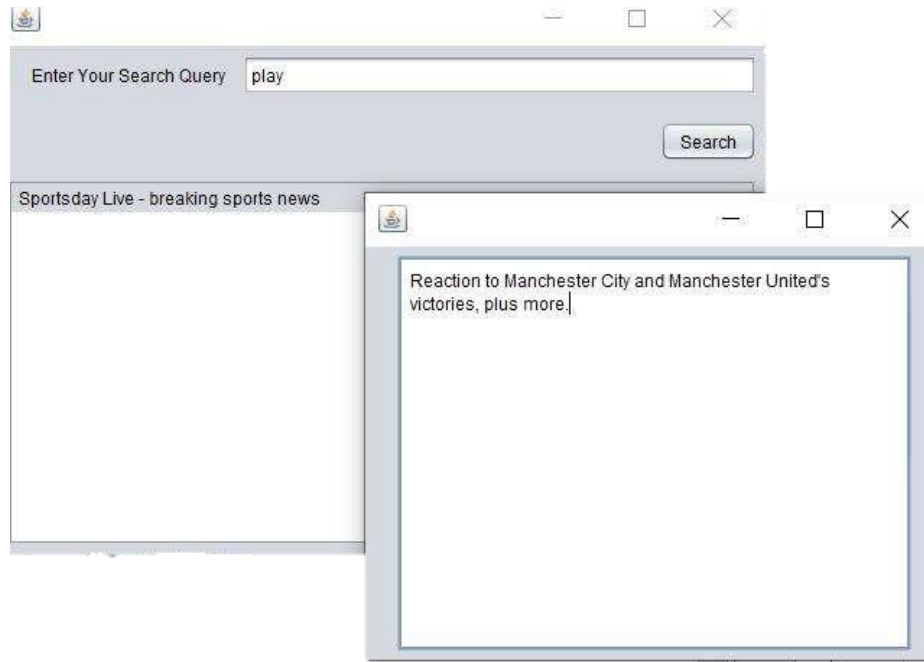
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The Query	Titles of Documents Results	Descriptions of Results
Ocean	Russian oil rig sinks under tow	Four people die and around 50 are missing after an oil drilling rig capsizes and sinks under tow in freezing seas in the Russian far east.
evaluates	Indian is world's shortest woman	Jyoti Amge, an Indian student measuring just 62.8cm, a little over two feet, is confirmed as the world's shortest woman by Guinness World Records.
Success	McFly's Judd wins Strictly crown	McFly drummer Harry Judd is voted the winner of Strictly Come Dancing, beating actress Chelsee Healey to the glitterball trophy.

Results

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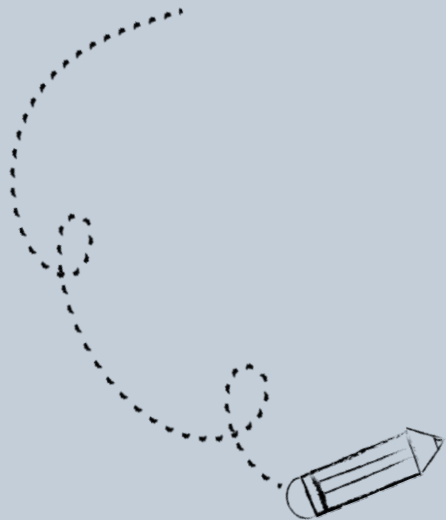
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The Query	Titles of Documents Results	Descriptions of Results
Parting	Mass burial for Philippines dead	A mass burial is being organised in the Philippines for scores killed by flash floods, which left at least 650 dead on the southern island of Mindanao.
	VIDEO: Loneliness of the long distance runner	Olympic hopeful Nader el Masri has been allowed to leave Gaza to compete at the Arab Games.

Kills	S Korea markets down on Kim death	S Korean markets decline after North Korea's state media announces the death of the country's leader Kim Jong-il.
	Mass burial for Philippines dead	A mass burial is being organised in the Philippines for scores killed by flash floods, which left at least 650 dead on the southern island of Mindanao.



Thanks for your time :)

