

INFORMATICS INSTITUTE OF TECHNOLOGY In Collaboration with UNIVERSITY OF WESTMINSTER

Song Searching Through the Use of Complex Queries

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Submitted in partial fulfilment of the requirements for the BSc in Computer Science degree at the University of Westminster.

April 2023

I. Abstract

The problem is quite simple, and it is quite possible that the reader has also experienced the same problem. The issue lies in recollection; you heard or listened to a song somewhere, be it the radio or at a party, and you don't know its title or the artist's name. As time goes on, your memory of it is not so great, but you turn to a search engine anyway. You remember a few lyrics, but your brain doesn't remember the lyrics just the way the original lyrics would read. You enter them in the search bar, but it doesn't return the correct song. Either the song isn't popular enough for something like Google to figure out, or the lyrical query is too broken down for it to resemble the original song.

How was this problem solved? The key lies in what the brain did during recollection. Whatever were the original lyrics, the brain paraphrased those lyrics to a different ordering of the words, adding or removing select words in replace of synonyms that the listener is more familiar with, all while forming completely different lyrical phrase(s). The problem was solved by mimicking this behaviour by first paraphrasing the query the search engine accepts as input. The various paraphrased queries are then matched to the database of lyrics that are already completely and fully paraphrased into several different paraphrased lyrical sets. This system ensures that whatever memory changes, the computer will be able to understand as it too paraphrases and checks for any similarities. This is essentially how a search engine was built to return highly accurate song results when it comes to finding songs using complex search queries.

Test results proved to return song results when paraphrased or faint recollective queries are submitted to the search engine, and the correct song result is almost always in the first few results of most relevant songs. Test results have proved that in many cases it beats popular search engines such as Google and YouTube.