# BFM: a forward backward string matching algorithm with improved shifting for information retrieval

# Abstract:

In recent years, the use of a string matching algorithm in text mining has grown in popularity. While searching, these algorithms must perform fewer character comparisons and pattern changes. In this article, we propose a new algorithm called forward and backward. BFM is a faster algorithm that matches patterns that can be seen from both the forward and backward directions.

# Introduction:

* A fast pattern matching algorithm is an essential component of page ranking in search engines and digital libraries, as well as checking syntax and spelling errors, detecting network breaches, and a variety of other applications. It is also required for bioinformatics, DNA sequence matching, and behavioural analysis.
* String matching algorithms are divided into two phases: preprocessing and searching . In general, the pattern is preprocessed that determines where the pattern needs to be shifted in order to find a mismatch. Then searching phase, comparisons between pattern and text characters are made from right to left, left to right, or in specific ways to find all occurrences of exact pattern match.
* In this article we present BFM, a new string matching algorithm for finding all occurrences of exact patterns or a string in a text.
* The goals of these algorithms are to reduce the number of character comparisons and increase the duration of changes and minimizing the total number of shifts.
* In contrast to other algorithms, this algorithm has a lot less character comparisons and a lot more change lengths.