

{tag} International Journal of Computer Applications  
Foundation of Computer Science (FCS), NY, USA

[Volume 140](#)

-  
[Number 9](#)

Year of Publication: 2016

Authors:

G.L. Prajapati, Abhijeet Singh Rathore, Bhavana Tanwar, Surbhi Bhadviy,  
Tushar Jain

10.5120/ijca2016909445

{bibtex}2016909445.bib{/bibtex}

## Abstract

String matching is a problem where a pattern is to be searched within a text. In this paper, we study about selected string matching algorithms which compute shifts; based on good suffix rule and/or bad character rule or their variations. Algorithms are compared on the basis of their execution time for different data sets; those differ on patterns and alphabet sizes. Finally, we present a summary for the selection of these algorithms in different applications, based on the experimental results obtained.

## References

1. Boyer R.S., Moore J.S., 1977, a fast string searching algorithm. Communications of the ACM. 20:762-772.
2. Aho, A.V., 1990, Algorithms for finding patterns in strings. in Handbook of Theoretical Computer Science, Volume A, Algorithms and complexity, J. van Leeuwen ed., Chapter 5, pp

255-300, Elsevier, Amsterdam.

3. Crochemore, M., 1997. Off-line serial exact string searching, in Pattern Matching Algorithms, ed. A. Apostolico and Z. Galil, Chapter 1, pp 1-53, Oxford University Press.

4. Zhu R.F., Takaoka T., 1987, on improving the average case of the Boyer-Moore string matching algorithm, Journal of Information Processing 10(3):173-177.

5. Smith P.D., 1991, Experiments with a very fast substring search algorithm, Software Practice & Experience 21(10):1065-1074.

6. Horspool R.N., 1980, Practical fast searching in strings, Software - Practice & Experience, 10(6):501-506.

7. Sunday D.M., 1990, a very fast substring search algorithm, Communications of the ACM. 33(8):132-142

8. The SMART tool used for execution of algorithms can be found at:  
<http://www.dmi.unict.it/~faro/smart/>.

### **Index Terms**

Computer Science

Algorithms

### **Keywords**

Good Suffix Rule, Bad Character Rule, Boyer Moore Variations, String Matching Problem, Performance Analysis.