Pokhara University

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Assignment 1 – **”An algorithm for suffix stripping”**

*Submitted to*

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**Title**: An Algorithm For Suffix Stripping

**Problem Statement:**

This paper deals with the problem of proper & effective removal of suffixes during processing words in a natural language. This improvised version of current hindering algorithms and their drawbacks, which makes less time consuming and faster processing. To improve the efficiency & performance of a language processing system we need proper suffix stripping algorithm , So it is necessary to determine how to solve this suffix stripping problem.

**Assumptions In Prior Work:**

In this paper, Prior work in suffix stripping algorithm a user have to manually define the set dictionary and need to update over time which ineffective and tedious job Based on these assumptions, existing suffix stripping algorithms are efficient and inaccurate . And these assumptions are Rule-based approaches, Language specific rules, Suffix Frequency.

**Idea:**

The paper introduces a new algorithm for suffix stripping, known as the Porter algorithm. The key idea is to use a set of rules based on Linguistic Analysis, Rule-based Approach, Refinement and Order of Rules to removal of suffixes. Which is a better approach then previous approaches. The Porter algorithm takes the linguistic structure of words as input and applies a series of transformation rules & refinement iteratively to strip suffixes and reduce words to their base forms, which result in overcoming the limitations of earlier approaches which is improving accuracy and while working with natural language.

**Technique:**

In this paper it is mentioned that to solve problems related to prior stripping techniques, new approaches Is introduced which is Porter Algorithm. In this approach step by stem approach is introduced which uses pattern matching and string manipulation techniques to identify and remove suffixes.

**Evaluation:**

The correctness of the Porter algorithm is checked & evaluated through step wise step experimentation and comparison with prior methods. The evaluation also includes a comparison with previous rule-based approaches, highlighting the improved performance and flexibility of the Porter algorithm.

**Implications:**

Due to more accurate and efficient then traditional stripping techniques, it is now possible to strip suffixes from a wide range of words while processing natural language which prove this porter algorithm more flexible and accurate. The Porter’s Algorithm was a notable progress in the field of suffix stripping as the problem which seemed to be impossible earlier in the field of suffix stripping is possible after the Porter ’s Algorithm.