Expansion of the First Hindi-Nepali Word-Net Based Bi-Lingual Dictionary and the advancement of the Human-Machine Interface

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Abstract

Natural Language Processing is introducing a new era in the field of Computer Science and Machine translation. Human-Machine interaction is to play a very important role in the coming centuries as the dependency of human over the machine is increasing variably. Word-Net was first introduced by Miller and Fellbaum in 1985. WordNet is a Lexical database for the Human
Languages. It groups the Human Language into sets of synonyms called “synsets” which provides short, general definitions, and records the various semantic relations between these synonym sets. Word-Net based Bi-Lingual Dictionary (Started in January, 2009) is a part of the Nepali WordNet Project under Indo-WordNet Project. It is an approach towards the construction and application of Multilingual Indo-WordNet, which is a pioneering effort on Nepali to Hindi and vice versa translation. The making of the Hindi-Nepali Word-Net was a challenge to us as the machine has to translate the sense of each word to produce the expected result. One of the major reasons behind this is the non-availability of rich lexical resources in Hindi and Nepali. The Hindi-Nepali WordNet based dictionary is thus an endeavor to prepare a rich lexical resource for the Hindi and Nepali Languages for effective machine translation and to facilitate the development of Information and Communication Technologies in Hindi-Nepali. The endeavor is inspired by the famous English WordNet, Hindi Word-Net and the Nepali Word-Net (Nepali Word-Net is also, created by us as a research and project work at Assam University, Silchar as a part of the Indo-Word-Net Project). In this paper we have discussed about the expansion approach of first Hindi-Nepali WordNet based Bi-Lingual Dictionary, the linguistic challenges involved, Word-Net creation tool interface and the synsets’ storage structure.

Reference

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