

HIERARCHICAL POSITIONING OF SEMANTIC ASSOCIATIVE TERMS IN FORMULATING AUTOMATIC BACK-INDEXES

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Abstract

The current work area aims at the machine-assisted construction of Hierarchical Subject-specific back-of-the book-Indexes, with the underlying fact that any book published, cannot appeal the reading masses without an appropriate and precisely defined back-index. Hence, the automatic generation of back-of-the-book-indexes become a necessary step for an effective retrieval of text highlighting any restricted domain. Inspired by the idea of utilizing the implicitly available Ontologies, feature-extraction process upon subject-specific terms is accompanied with machine-learning process to segregate the more focused terms from less significant ones by manipulating upon the co-occurrence measures of the thematically co-related terms. Finally, an appropriate neural net approach is taken up to initiate the parallel search with spreading activation process in order to converge the concept space by portraying out strongly related concepts among the different chapters of the book. The Experimental results further help in arranging the correlated terms at the back-of-the-book with an apparently meaningful hierarchy.

Keywords: Implicit Ontologies, Concept Hierarchy, Clustered Concept Spaces, Hopfield Net, Converged synaptic weights.