

An Intelligent Search Engine Assessing Learning Material to Improve Learning Procedures

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ABSTRACT

As the growth of e-learning is expanding, the need for organizing and searching for e-learning content resources grows too. One can find on the internet many sites that provide searches for e-learning content resources on the web. But what about the need for the search of e-content in a e-learning platform or a digital library? SOM O.D.I.S.S.E.A.S is an intelligent searching tool using the Self-Organizing Map (SOM) algorithm, as a prototype e-content retrieval tool. The proposed searching tool has the ability to adjust and scale into any e-learning platform that requires concept-based queries. The SOM algorithm has been used successfully for document organization as well as for document retrieval. In the proposed methodology, maps are used for the automatic replacement of the unstructured, the half structured and the multidimensional data of text, in a way that similar entries in the map are represented near between them. The performance and the functionality of the document organization, and retrieval tool employing the SOM architecture, are also presented. Furthermore, experiments were performed to test the time performance of a learning algorithm used for the direct creation of teams of terms and texts enabling efficient searching and retrieval of the documents.