Abstract

In the context of E-learning, adaptive systems are more specialized and focus on the adaptation of learning content and the presentation of this content. The adaptive E-learning system focuses on how the profile data is learned by the learner and pays attention to learning activities, cognitive structures and the context of the learning material. The system controls the process of collecting data about the learner, the process of acquiring the learner profile and during the adaptation process. The Semantic Web adds structured meaning and organization to the navigational data of the current web, based on formalized ontologies and controlled vocabularies with semantic links to each other. The semantic web-based educational systems need to interoperate, collaborate and exchange content or re-use functionality. In this paper, the proposed approach aims at improving representation of a learner model during acquiring leaner profile, which is based on learner interest and learning style, in content-based approaches by performing the next steps. First step is domain concept filtering in which concepts and items of interests are compared to the domain ontology to check the relevant items to the selected learning domain using ontology based semantic similarity. Second step is incorporating semantic content into the term vectors. Term definitions and relations are used, provided by WordNet ontology, to perform domain-specific concepts as category labels for the semantic learner models. The Learning style of the learner can be acquired by using the learner behavior during utilizing the E-learning system.
Proposed Approach to Build Semantic Learner Model in Adaptive E-Learning

References

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Index Terms

Computer Science

Information Sciences

Keywords

Learner Model  Learner Interest  Learning Style  Ontology  Domain Concept
Filtering  Semantic
Similarity  Concept
Semantic Learner Model