HIDDEN MARKOV MODEL BASED CHARACTERIZATION OF CONTENT ACCESS PATTERNS IN AN E-LEARNING ENVIRONMENT (FriPmPO1)

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Abstract:
Personalized Education (PE) emphasizes the importance of individual differences in learning. To deliver personalized e-learning services and content, PE encompasses the abilities of identifying and understanding individual learner's needs and competence so as to deploy appropriate learning pedagogy and content to enhance learning. In this paper, we introduce a Hidden Markov Model Based Classification approach to enable a multimedia e-learning system to characterize different types of users through their navigation or content access patterns. Our experiments show that the proposed approach is capable of assigning student users to their corresponding categories with high accuracies. The results of such classifications would find applications in adaptive user interface design, user profiling and as supportive tools in personalized e-learning.