

Abstract of the doctoral thesis

Strategies of operation for intelligent tutoring systems operating on imprecise data

This dissertation aims to propose a method for content adaptation in an e-learning course to leverage various learning phenomena. The study introduces a course architecture featuring adaptive content, which will serve as the foundation for developing an adaptation technique utilizing selected imprecise educational data through fuzzy control. The document surveys existing solutions within the domain of implementing various teaching strategies. It also delineates the challenges associated with acquiring and processing varied educational data, emphasizing the issue of modeling imprecise data. Furthermore, the effectiveness of various fuzzy controllers is compared with machine learning algorithms. Various strategies for the operation of intelligent tutoring systems are presented in the dissertation, along with discussions on the implementation process and data collection within a course with adaptive content.

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