Abstract

This study developed an adaptive distributed tutoring system targeting on students’ learning style and collaborative learning. The system is composed of intelligent agents which plays a definite role in making the system adaptive using the association rule mining and fuzzy C-means clustering. This agent oriented system is modeled using Tropos for a consistent development. The system is composed of a student model, a tutor model and a system model. The adaptation is derived into three levels of adaptation namely user level adaptation, user interface level adaptation and system level adaptation. In the user level adaptation, the system would adaptively recommend contents with variety of contents based on the individual learning behavior and overall performance of the students. The user interface level adaptation would allow the user to personalize the user-interface based on his/her own likeliness. Our system would persist the personalization in the user interface and whenever user logs in to the system, the personalized user-interface is presented. The system level adaptation would store/replicate contents in the distributed environment which is based on the current system disk space and memory available in the system. A total of 144 students had been taken in our study with Java as the course. The experimental result reveals various styles of the user and how the individual
performance varies from the group. The results also provide an evidence of the system could increase learning factor of the students.

References

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7471–7478


Index Terms

Computer Science

Software Systems

Keywords

Agents Tutoring System Intelligent Learning System Tropos Extension of Tropos