

Classifying modality learning styles based on Production-Fuzzy Rules

Rahmah Mokhtar^{ab}; Siti Norul Huda Sheikh Abdullah^a; Nor Azan Mat Zin^a

^aFaculty of Information Science and Technology, The National University of Malaysia Bangi,
Selangor Malaysia

^bFaculty of Computer Science and Software Engineering Malaysia University of Pahang Jalan
Gambang, Kuantan, Pahang, Malaysia

ABSTRACT:

Adaptive Intelligent Web Based Education System, (AIWBES) is an education technology which has been used world-wide. An Intelligent and adaptive AIWBES is materialized from the combination of Users' Model, Knowledge Based and Inference Engine. The development of adaptation or personalization in AIWBES will provide an Intelligence system for the users to obtain knowledge and information. This paper will focus on the user model to enhance AIWBES personalization based on its users' modality learning style. The objective of this paper is to compare the precision between Production-Fuzzy Rule and Naives Bayes for classifying modality learning styles in the user model. A prototype namely K-Stailo, is developed. These two different techniques were applied in K-Stailo. A test was carried out by the researcher to evaluate the precision between these two techniques. The results show that Production - Fuzzy Rule is the better technique when compared to Naives Bayes in user's modality learning style prediction.

KEYWORDS:

AIWBES; Simple Rule Base; Fuzzy Logic; user model; Naive Bayes

ACKNOWLEDGMENT

This research is funded by Malaysia Ministry of Science and Technology (MOSTI) in research grant Intelligent Web Tutoring. The researcher would like to thank all individuals and organizations who have been involved in this research.

REFERENCES

1. Miniwatts Marketing Group. (online) Internet World Stats:Usage and Population Statistics. <http://www.internetworldstats.com/stat3.htm>. internet statistic, 2009.
2. Millan, E, G,-H, Emilio, Riscos, E.G, Rueda, A & de la Cruz, J.L.P.2003. "TAPLI: An Adaptive Web-Based Learning Environment for Linear Programming". In R.Conejo et. al. (Eds.): CAEPIA-TTIA, 2003.
3. Brusilovsky, Peter. "Adaptive and Intelligent Web-based Educational Systems. International Journal of Artificial Intelligence in Education", 13:156–169.IOS Press., 2003.
4. Brusilovsky, P. " Methods and Techniques of adaptive Hypermedia. User Modeling and User-Adapted Interaction" , , 9 (2-3),p.87-129, 1996.
5. Graf, Sabine: Adaptivity in Learning Management Systems Focusing on Learning Styles. Phd. Thesis. Faculty of Informatics. Vienna University of Technology,Vienna. ,2007.