A Distance-Learning Model Based on Web Mining

Ruimin Shen
Qijun Wang
Dept. Of Computer Science and Technology
Shanghai Jiaotong University, Shanghai, 200030, P.R.C
Email: rmshen@mail.sjtu.edu.cn

Abstract: Distance-Learning based on WWW has become a trend for the development of education. But the distance-learning site based on WWW is static, the designers of the courses don’t know whether the design of courses is rational or consistent with the teaching law. While there is a lot of students’ information accumulated in the web site, and the information is useful for our course designers. In this study, we present a distance-learning model based on Web Mining, which can take advantage of those students’ information accumulated in the web site.

1. Introduction

Distance-learning based on WWW has become a trend for the development of education. The available distance-learning model based on WWW is discussed in (Xuejun Li 1999). But recently the distance-learning site based on WWW is static, and the designers of the courses don’t know whether the design of courses is rational and consistent with the teaching law. While there is a lot of students’ information accumulated in the web sites, such as students’ access patterns and registration and communication data information, and these information is useful for our course designers and teachers.

In this study, we present a distance-learning model based on Web Mining, which can take full advantage of those students’ information accumulated in the web sites.

2. A Distance-Learning Based on Web Mining

The model integrates the Web Mining technology into the available model base on WWW. It’s architecture is shown (Fig.1). In this model, we add the Web Mining module into the available model. The Web Mining model is located in the server-side and performs in the server-side.

According to our special system for distance learning, the Web Mining process as shown in (Fig.4). The Web Mining module has three phases(Robert cooley et al. 1998): Preprocessing(Yilin yang et al.1999), mining process and pattern analysis.

3. Conclusion

Our model has following points: The course designers can reconstruct a Web sites in order to better serve the needs of students of a site according to these information such as the students’ access patterns and page access frequency statistics; it can provide individualised page or different course content for individual student; and it can provide teachers the students’ feedback, and teachers can redesign their teaching plans too.
Figure 1. A Distance-Learning Model Based on Web Mining

![Diagram of a Distance-Learning Model Based on Web Mining]

Figure 2. Web Mining Module

Reference
Xuejun Li (1999). Integration of Synchronous & Asynchronous Distance Learning System with Q&A Ability Master’s thesis, Shanghai Jiaotong University, Shanghai, PRC