

Universidad de Lima
Facultad de Ingeniería y Arquitectura
Carrera de Ingeniería de Sistemas



CONTENT-BASED LEARNING OBJECT RECOMMENDATION SYSTEM USING A USER PROFILE ONTOLOGY FOR HIGH SCHOOL STUDENTS

Tesis para optar el Título Profesional de Ingeniero de Sistemas

Bruna Morillo Palacios

Código 20142059

Asesor

Juan Manuel Gutierrez Cardenas

Lima – Perú

Mayo de 2020

Content-based learning object recommendation system using a user profile ontology for high school students

Bruna Morillo-Palacios¹ and Juan Gutiérrez-Cárdenas²
20142059@aloe.ulima.edu.pe, jmgutier@ulima.edu.pe
Universidad de Lima, Lima, Perú

Abstract.

The lack of quality of education in Peruvian schools has caused young people to look for other ways to obtain information, of which the web stands out. However, this tool is made up of billions of web pages, which affects the time each student takes to search. To address this situation, we propose the development of a content-based recommendation system that uses ontologies for data storage. Our recommender system allows the user profile data to be integrated into the model to consider its characteristics as part of the recommendation. We carried out two sets of validations for the evaluation of our proposal, one with expert judgment and the other by gathering the opinion of the end-users. As a result of the first evaluation, we found that 76.25% of the items were highly related to the search. For the second evaluation, we found that our system obtained a usability of 78.67%, considering the opinion of the students tested.

Keywords: Recommender System, Content Based, Ontologies, Learning Objects, Education.

Proceedings of the Future Technologies Conference (FTC) 2020, Vol.1, pp. 838-858
© 2020 Springer Nature Switzerland AG. Advances in Intelligent Systems and Computing

https://doi.org/10.1007/978-3-030-63128-4_63