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Collaborative filtering approach in adaptive learning

Khadiiev K., Zulfat M., Sidikov M.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, International Journal of Pharmacy and Technology. All rights reserved. Nowadays an adaptive approach in education is gaining in popularity. But what does this adaptive approach mean? Adaptive learning (also known as Adaptive education) means that the education system has a personal approach for each student or for groups of students that fits to the students' abilities. Teacher must pick up the most relevant topic for explanation, exercises and tests for such an education process. Also the teacher should adapt the order of learning topics for the current student. It is a very big and hard job, but machine learning algorithms can solve some of these tasks instead of teacher. What do we have? We have a set of lessons and students. In each step of the education process we select one lesson that fits best for a current student. This problem can be solved by recommender systems of algorithms. Recommender systems predict rating or "preference" that a user would give to the item, and by similar way an adaptive education system also predict lessons "ratings" for user. In the paper we will define "rating" of lessons and what does it mean "fits the best". Also we give some explanations of a chosen machine learning algorithm.

Keywords

Adaptive education system, Adaptive learning, Collaborative filtering, Machine learning, Recommender system