

Topic for Bachelor's Thesis

Title: Building a Recommendation System for Buying and Analyzing Online Products Using Machine Learning Techniques

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Starting period: immediately

Description:

Presently, many people like to purchase their stuff online, and many of them trust the marketers; they mainly depend on the reviews to purchase the products. The project aims to build an application that supports the users in saving their time by recommending the best item based on the reviews of other users. To ensure that different sources of different reviews for such items should be collected and autonomously classified, clustered, or fused to get a result regarding the actual user's rate of such an item. The system can be achieved using machine learning techniques and natural language processing techniques to extract features and categorize similar reviews of users that may have similar opinions or duplicate content. Results of the project are to be demonstrated by a running demo application as a Web App.

Technology: Programming language is Python, Libraries can be NLTK, Scikit-learn, Keras

Literature to start with:

Kim, T.-Y., Ko, H., Kim, S.-H., & Kim, H.-D. (2021). Modeling of recommendation system based on emotional information and collaborative filtering. *Sensors*, 21(6), 1997.

<https://doi.org/10.3390/s21061997>

Bhalse, N., & Thakur, R. (2021). Algorithm for movie recommendation system using collaborative filtering. *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2021.01.235>

Soares, M., & Viana, P. (2015). Tuning metadata for better movie content-based recommendation systems. *Multimedia Tools and Applications*, 74(17), 7015-7036.

<https://doi.org/10.1007/s11042-014-1950-1>

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