

Chapter 6

Simplifying Learning Experience on a Personalized Content Recommendation System for Complex Text Material in E-Learning

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ABSTRACT

Complex material is difficult to absorb in e-learning environments, which distracts and lowers learning outcomes. This initiative proposes that consumers watch simple movies with the same topic to improve learning. Text analytics recommends tailored videos to consumers. The algorithm can make more tailored recommendations by evaluating text interaction and learning preferences. The system simplifies learning and makes material more complicated and intelligible. Visual videos aid learning by improving memory and comprehension. Analyze the data before using the advice. NLP can extract key text content and context. Review results are used to develop related topics and themes. Next, find relevant video content using keywords and keywords list. Previous video data can be used to recommend video material. Videos should simplify content to help consumers understand and remember it. Text interactions should be considered when personalising video suggestions. Create user profiles using engagement indicators like time on page, scroll depth, and click behaviour.

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1. INTRODUCTION

The blast of innovation and the web has brought almost a phenomenal sum of data promptly accessible at our fingertips. From scholarly inquiries about papers to work-related reports to online articles and social media posts, we are continually uncovering tremendous sums of data on a day-by-day basis (Abu Shkheedim et al., 2022). Whereas this accessibility of data may be an incredible advantage, it too presents a significant challenge for those who battle to form a sense of the complexity of the text (Al Khawaldeh et al., 2022). People who are not native speakers of the dialect or who are not conversant with the topic at issue will find this obstacle to be far more overwhelming (Alawneh, 2022). Because of linguistic barriers or a requirement for prior knowledge on the topic, these individuals could have a difficult time grasping the significance of the material because it requires background information (Alawneh et al., 2022).

As a consequence of this, individuals run the risk of missing out on vital information and tidbits of wisdom that might prove to be useful to them in the future (Alawneh & Al-Shara'h, 2022). To find a solution to this problem, proposal frameworks have been developed to simplify the learning process for customers by providing video adaptations of the content record (Alawneh et al., 2022). These frameworks are designed to analyse the content of a content record and provide a video form that may be effectively absorbed by the customer (An et al., 2023). Customers will be able to acquire a more profound comprehension of the subject matter without having to struggle through the complexities of the text if they do this (Aravind et al., 2023). This method is especially helpful for people who learn best via visual means or who find that obtaining information through recordings rather than material is a less taxing way to accomplish their goals (Angeline et al., 2023). To further improve the quality of the learning experience, the framework for the proposal may include supplementary elements, such as subtitles, comments, or intuitive exams (Padmanabhan et al., 2023). In this piece, we will examine how suggestion frameworks are transforming the learning process and making it simpler for individuals to acquire complicated information (Demeter et al., 2021). In the following, we are going to delve into the benefits of this invention and how it can help people in various fields of consideration and callings make advancements in their learning results (Gao & Liu, 2021).

In e-learning environments, users often find it difficult to process complex information, which causes distraction and reduces learning outcomes (Gomathy & Venkatasbramanian, 2023). To solve this problem, this project offers a proposal that provides users with simple videos with the same content to enhance learning (Guiamalon, 2022). Recommendations use text analytics to analyze text content and recommend personalized videos to users (Hong, 2018). By considering the user's interaction with the text and learning preferences, the system can provide more personalized and personalized recommendations (Hong, 2021). The purpose of the system is to simplify the learning process for users and to make information more complex and understandable (Hong, 2021). Visual videos can improve learning outcomes by helping users better remember and understand information (Hong, 2023). To use the recommendations, the first step is to analyze the concrete data. Natural language processing (NLP) can be used to extract important content and context from text (Hong et al., 2022). The results of the review are used to create a list of related topics and topics. The next step is to use the keywords and keywords list to identify suitable video content (Jayakumar et al., 2022).

Pre-existing video data can be used to recommend video content to users. Videos should be simple versions of the same content designed to help users better understand and retain the material (Lian et al., 2022). To personalize video recommendations, recommendation strategies should consider users' interactions with text (Rad et al., 2020b; Tripathi, 2017). User engagement metrics such as time on the

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