Use of Deep Learning in Modern Recommendation System: A Summary of Recent Works

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Abstract

With the exponential increase in the amount of digital information over the internet, online shops, online music, video and image libraries, search engines and recommendation system have become the most convenient ways to find relevant information within a short time. In the recent times, deep learning’s advances have gained significant attention in the field of speech recognition, image processing and natural language processing. Meanwhile, several recent studies have shown the utility of deep learning in the area of recommendation systems and information retrieval as well. In this short review, we cover the recent advances made in the field of recommendation using various variants of deep learning technology. We organize the review in three parts: Collaborative system, Content based system and Hybrid system. The review also discusses the contribution of deep learning integrated recommendation systems into several application domains. The review concludes by discussion of the impact of deep learning in recommendation system in various domain and whether deep learning has shown any significant improvement over the conventional systems for recommendation. Finally, we also provide future directions of research which are possible based on the current state of use of
deep learning in recommendation systems.

References


**Index Terms**

Computer Science  
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**Keywords**

Deep Learning, Recommender system, Literature review, Machine Learning, Collaborative filtering, Hybrid system.