

## Abstract

The current technological advancements have made it easier to watch movies, especially through online streaming platforms such as Netflix. Social media platforms like X platform are used to discuss, share information, and recommend movies to other users through post at X platform. Film ratings can be used to build a recommendation system, including Collaborative Filtering (CF) and Content-based Filtering (CBF). However, both methods have their own limitations. Therefore, a Hybrid Filtering approach is required to overcome the existing challenges by combining aspects of CF and CBF. The Hybrid Filtering approach involves CF and CBF processes to improve the accuracy of film recommendations. In this study, the Cascade Hybrid Filtering method was used, with the Convolutional Neural Network (CNN) as the evaluation tool. This research presents a significant contribution by implementing the Cascade Hybrid Filtering method based on CNN. This research uses several scenarios to compare methods to produce the most accurate model. This research concludes that Cascade Hybrid Filtering, which involves CNN and optimized with RMSProp, produces the best movie recommendation system with MAE of 0.8643, RMSE of 0.6325, and the highest accuracy rate of 86.95%. The RMSprop optimizer gives the learning rate  $6.250551925273976e-06$ , 88.40% for accuracy and increased by +5.52 from the baseline.

**Keywords:** Recommender System, Cascade Hybrid Filtering, Convolutional Neural Network