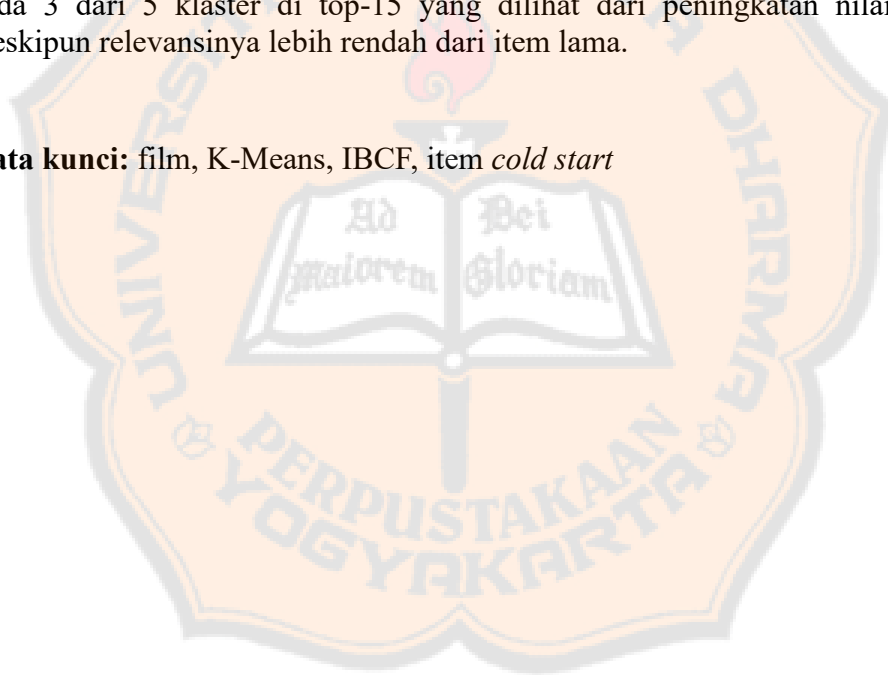


ABSTRAK

Film merupakan media hiburan dan komunikasi yang banyak digemari. Meningkatnya produksi film setiap tahun menyebabkan terjadinya *information overload* yang dapat diatasi menggunakan sistem rekomendasi. Namun, sistem rekomendasi seringkali mengalami masalah item *cold start* yaitu kondisi ketika item belum memiliki rating sehingga sulit untuk direkomendasikan. Untuk menangani masalah tersebut, teknik *clustering* K-Means dikombinasikan dengan Item Based Collaborative Filtering (IBCF). Proses *clustering* dilakukan dengan menggunakan *Euclidean Distance* dan *Jaccard Distance*, yang dievaluasi menggunakan *silhouette coefficient*, sementara hasil rekomendasi dievaluasi menggunakan metrik precision, recall, dan coverage. Hasil penelitian menunjukkan bahwa terdapat 5 klaster yang terbentuk dengan nilai *silhouette coefficient* sebesar 0,6563. Klaster yang terbentuk memiliki karakteristik yang berbeda berdasarkan *genre* dan *vote_average*, sedangkan *popularity* tidak menunjukkan perbedaan yang signifikan antar klaster. Sistem juga berhasil merekomendasikan item *cold start* pada 3 dari 5 klaster di top-15 yang dilihat dari peningkatan nilai coverage meskipun relevansinya lebih rendah dari item lama.

Kata kunci: film, K-Means, IBCF, item *cold start*



ABSTRACT

Films are a popular medium of entertainment and communication. The growing number of films produced each year causes information overload, which can be addressed using recommendation systems. However, recommendation systems often face item cold start problem, which occurs when items have no ratings yet, making them difficult to recommend. To address this problem, K-Means clustering was combined with Item Based Collaborative Filtering (IBCF). Clustering was performed using Euclidean and Jaccard Distance, evaluated with the silhouette coefficient, while the recommendation results were evaluated using precision, recall, and coverage. The results showed that 5 clusters were formed with a silhouette coefficient 0,6563. The clusters had different characteristics mainly based on genre and vote average, while popularity showed no significant difference between clusters. The system also successfully recommended cold start items in 3 of 5 clusters at top-15, shown by increased coverage, though with lower relevance than warm items.

Keywords: *films, K-Means, IBCF, item cold start*

