

ABSTRAK

Anime merupakan salah satu tontonan yang digemari oleh banyak orang, baik itu dari kalangan anak kecil sampai orang dewasa. Biasanya *anime* dapat berupa serial ataupun juga *film*. Banyaknya jumlah judul *anime* membuat orang terkadang kesulitan untuk menentukan *anime* yang hendak mereka tonton selanjutnya. Dalam hal ini, Sistem Rekomendasi dapat memberikan solusi terhadap permasalahan dalam menentukan *anime* yang belum pernah ditonton.

Pada penelitian ini, dilakukan perbandingan dari dua metode, yaitu metode *Item-Based Collaborative Filtering* dan metode *User-Based Collaborative Filtering*. Langkah pertama yaitu mengambil dataset rating anime dari website *kaggle.com*. Kemudian kedua metode collaborative tersebut digunakan untuk membangun sistem rekomendasi. Kemudian untuk menghitung *similarity* digunakan metode *Pearson Correlation Based Similarity*, setelah itu untuk menghitung prediksi *rating* digunakan metode *Weighted Average of Deviation*. Hasil prediksi rating nantinya digunakan untuk memberi rekomendasi kepada pengguna yang sesuai. Rekomendasi yang diberikan oleh sistem nantinya berupa 10 judul *anime*. Perbandingan dari kedua metode *Collaborative* akan dilihat melalui akurasi. Akurasi dari hasil prediksi rating tadi akan dihitung menggunakan *Mean Absolute Error (MAE)*.

Dari penelitian yang sudah dilakukan, dapat diambil kesimpulan bahwa metode *Item-Based Collaborative Filtering* lebih unggul daripada metode *User-Based Collaborative Filtering*, karena memiliki nilai MAE terkecil sebesar 0,812098 menggunakan 10 *Neighbour*. Sedangkan metode *User-Based Collaborative Filtering* memiliki nilai MAE terkecil sebesar 1,047013 menggunakan Semua *Neighbour*. Dengan demikian berarti metode *Item-Based Collaborative Filtering* lebih unggul dalam mencari prediksi rating serta memberikan rekomendasi dalam kasus Sistem Rekomendasi *Anime*.

Kata kunci: *Anime*, Sistem Rekomendasi, *Item-based Collaborative Filtering*, *User-Based Collaborative Filtering*, *Pearson Correlation Based Similarity*, *Weighted Average of Deviation*, *Mean Absolute Error*

ABSTRACT

Anime is one of the shows that is loved by many people, both from small children to adults. Usually anime can be in the form of a series or a movie. The large number of anime titles makes it difficult for people to decide which anime they want to watch next. In this case, the Recommendation System can provide a solution to the problem of determining which anime has never been watched.

In this study, a comparison of the two methods will be carried out, namely the Item-Based Collaborative Filtering method and the User-Based Collaborative Filtering method. But first, take the anime rating dataset from the kaggle.com website. Then both collaborative methods will be used to build the system. Then to calculate similarity the Pearson Correlation Based Similarity method will be used, after that to calculate rating predictions the Weighted Average of Deviation method will be used. The rating prediction results will later be used to provide recommendations to appropriate users. The recommendations given by the system will be in the form of 10 anime titles. Comparison of the two Collaborative methods will be seen through their accuracy. The accuracy of the rating prediction results will be calculated using the Mean Absolute Error (MAE).

From the research that has been done, it can be concluded that the Item-Based Collaborative Filtering method is superior to the User-Based Collaborative Filtering method because it has the smallest MAE value of 0,812098 using 10 Neighbour. Meanwhile, the User-Based Collaborative Filtering method has the smallest MAE value of 1,047013 using All Neighbour. This means that the Item-Based Collaborative Filtering method is superior in finding rating predictions and providing recommendations in the case of the Anime Recommendation System. This research has also passed the Validity Test after being proven through manual calculations using the Microsoft Excel application and calculations contained in the system, with an accuracy of 90%

Keyword: *Anime, Recommender System, Item-based Collaborative Filtering, User-based Collaborative Filtering, Pearson Correlation Based Similarity, Weighted Average of Deviation, Mean Absolute Error*