ABSTRAK

Sistem rekomendasi adalah sistem yang bertanggung jawab atas mesin rekomendasi yang mampu mengidentifikasi serta memberikan konten berpotensi besar dipilih oleh pengguna berdasarkan penyaringan informasi yang mengambil preferensi dari perilaku maupun riwayat pengguna. Metode *collaborative filtering* merupakan salah satu metode dalam sistem rekomendasi, yang bekerja dengan menyaring informasi dari profil pengguna lain berupa *rating* untuk memprediksi *item* yang mungkin disukai pengguna. Metode *Collaborative Filtering* (*CF*) mempunyai 2 metode umum, yaitu *item-based cf* dan *user-based cf*.

Pada penelitian ini, penulis membangun sistem yang dapat merekomendasikan *item* berupa objek wisata kepada pengguna dan menghitung keakuratan sistem dalam menghitung prediksi *rating*. Sistem dibangun dengan menggunakan algoritma *item-based cf* dan menggunakan perhitungan *similarity pearson correlation*. Skenario perhitungan prediksi dilakukan dengan mengubah-ubah maksimum *neighbor*. Kesalahan dari hasil prediksi *rating* terhadap *rating* sesungguhnya dihitung menggunakan *Mean Absolute Error* (MAE). Dataset yang digunakan berasal dari survey berupa *rating* 100 user terhadap 10 objek wisata.

Hasil akhir dari penelitian menunjukkan bahwa metode *item-based cf* dapat digunakan untuk membangun sistem rekomendasi objek wisata dan cukup akurat dalam memprediksi *rating* objek wisata. Hal ini dibuktikan dengan hasil uji MAE, dimana pada maksimum *neighbor* 6 metode *item-based cf* dapat memprediksi *rating* paling baik dengan MAE sebesar 0.6254.

Kata kunci : *Collaborative Filtering*; *Item-Based Collaborative Filtering*; MAE; *User-Based Collaborative Filtering*; *Neighbor*; *Rating*; Sistem Rekomendasi;

ABSTRACT

Recommendation system is a system that is responsible for recommendation engines that are able to identify and provide potentially large content chosen by users based on information filtering that takes preferences from user behavior and history. Collaborative Filtering method is one of the methods in the recommendation system, which works by filtering information from other user profiles in the form of ratings to predict items that users might like. Collaborative Filtering (CF) method has 2 general methods, namely Item-Based CF and User-Based CF.

In this research, the authors build a system that can recommend items in the form of attractions to users and calculate the accuracy of the system in calculating rating predictions. The system is built using the Item-Based CF algorithm and uses the Pearson Correlation similarity calculation. The scenario for calculating predictions is done by changing the maximum of the neighbors. Errors from the rating prediction of the true rating actually calculated using the Mean Absolute Error (MAE). Dataset that used is derived from a survey in the form of a rating of 100 users towards 10 tourist attractions.

The final results of the research showed that the Based-Item CF method can be used to build Attraction recommendation system and fairly accurate in predicting Attraction rating. This is evidenced by the results of the MAE test, where in the maximum neighbor 6 the Item-Based CF method can predict the best rating with MAE of 0.6254.

Keywords: Collaborative Filtering; Item-Based Collaborative Filtering; MAE; User-Based Collaborative Filtering; Neighbor; Rating; Recommendation System;