CHAPTER V

CONCLUSION

This chapter will discuss the conclusions of the methods that have been compared to weight users in the recommendation system in section 5.1 and also suggestions for further research development in 5.2.

5.1   Conclusion

Based on the comparative analysis result, several conclusions obtain, specifically:

1. The number of K on the KNN and the percentage of train data does not affect the calculation of the MAE and RMSE errors, this happens because the amount of trained data has not changed.

2. Taking into account the weight on the KNN does not affect the excellent quality of the recommendation system, the number of errors from MAE or RMSE shows that the number is not much different.

3. There is a difference in execution time during the KNN training, where the recommendation system that does not consider weight has a longer execution time.

4. The recommendation system by considering the active user has a lower error calculation value than those that do not believe the active user, where the active user generates an average MAE value of 0.6 and RMSE of 0.8.

5. Firefly Algorithm has a slightly lower error calculation result by 0.6 for MAE instead of Bat Algorithm with 0.62 MAE. However this cannot use as a reference for Firefly having a better performance.

5.2   Suggestions

The suggestions for developing the next Recommendation System research are as follows:

1. Using a method that reduces the shape of the utility matrix, with the hope that the time required for the training process can be faster and produce a better quality recommendation system.

2. Using other Swarm Intelligence methods to compare with the Bat Algorithm and Firefly Algorithm.

3. Using other similarity search methods to compare the Pearson Correlation Coefficient.

4. Add supporting parameters during the training process, so that it can produce the best hyperparameters.

5. Using Swarm Intelligence to find the user's best route in the recommendation system so that it could compare with user weightings technique.

6. Using data validation techniques so that it could compare with the error rate measurement.