BAB VI

KESIMPULAN DAN SARAN

6.1 Kesimpulan

Berdasarkan hasil dan pembahasan di atas, maka penulis dapat merumuskan beberapa kesimpulan dsebagai berikut :

1. Model algoritma *Neural Network* dan *Random Forest* dapat direkomendasikan untuk melakukan prediksi hasil pertandingan *Mobile legends bang bang* (MLBB) dengan masing – masing akurasi sebesar 82.30 % dan 80.04 %.
2. Dalam perancangan model algoritma *Neural Network*, jumlah persentase data latih, jumlah neuron dalam *hidden layer*, dan jumlah *epoch* yang digunakan dapat mempengaruhi hasil skor akurasi model.
3. Jumah node dalam perancangan model algoritma *Random Forest* dapat mempengaruhi hasil skor akurasi model.

6.2 Saran

Penulisan ini hanya berfokus pada *game Mobile legends bang bang* (MLBB), dimana dataset yang digunakan merupakan hasil histori pertandingan pada tier *mythic*. Untuk saran bagi penulisan selanjutnya, dapat mencoba menambah fitur yang digunakan dalam penulisan, seperti jenis *hero* yang di gunakan pemain, ataupun faktor – faktor lain yang mempengaruhi hasil pertandingan *Mobile legends bang bang* (MLBB).

DAFTAR PUSTAKA

[1] A. Drachen *et al.*, "Skill-based differences in spatio-Temporal team behaviour in defence of the Ancients 2 (DotA 2)," *Conf. Proc. - 2014 IEEE Games, Media, Entertain. Conf. IEEE GEM 2014*, vol. 2, no. DotA 2, 2015.

[2] A. S. Chan, F. Fachrizal, and A. R. Lubis, "Outcome Prediction Using Naïve Bayes Algorithm in the Selection of Role Hero Mobile Legend," *J. Phys. Conf. Ser.*, vol. 1566, no. 1, 2020.

[3] A. Tlili, F. Essalmi, L. J. Ben Ayed, M. Jemni, and Kinshuk, "A Smart Educational Game to Model Personality Using Learning Analytics," *Proc. - IEEE 17th Int. Conf. Adv. Learn. Technol. ICALT 2017*, pp. 131–135, 2017.

[4] A. C. Putro, "Sistem Prediksi Kemenangan Tim Pada Game Mobile Legends Dengan Metode Naive Bayes Mobile Legends Win Prediction Using Naive Bayes," *J. Teknol. Inf. dan Ilmu Komput.*, 2018.

[5] K. Passi and N. Pandey, "Increased Prediction Accuracy in the Game of Cricket Using Machine Learning," *Int. J. Data Min. Knowl. Manag. Process*, vol. 8, no. 2, pp. 19–36, 2018.

[6] J. Le Louedec, T. Guntz, J. L. Crowley, and D. Vaufreydaz, "Deep learning investigation for chess player attention prediction using eye-tracking and game data," *Eye Track. Res. Appl. Symp.*, 2019.

[7] H. Kaur and S. Jain, "Machine learning approaches to predict basketball game outcome," *Proc. - 2017 3rd Int. Conf. Adv. Comput. Commun. Autom. (Fall),*

ICACCA 2017, vol. 2018-Janua, pp. 1–7, 2018.

[8] A. Semenov, P. Romov, S. Korolev, D. Yashkov, and K. Neklyudov, "Performance of machine learning algorithms in predicting game outcome from drafts in Dota 2," *Commun. Comput. Inf. Sci.*, vol. 661, pp. 26–37, 2017.

[9] F. Barboza, H. Kimura, and E. Altman, "Machine learning models and bankruptcy prediction," *Expert Syst. Appl.*, vol. 83, pp. 405–417, 2017.

[10] M. Chen, Y. Hao, K. Hwang, L. Wang, and L. Wang, "Disease Prediction by Machine Learning over Big Data from Healthcare Communities," *IEEE Access*, vol. 5, pp. 8869–8879, 2017.

[11] J. M. Zhang, M. Harman, L. Ma, and Y. Liu, "Machine Learning Testing: Survey, Landscapes and Horizons," *IEEE Trans. Softw. Eng.*, pp. 1–1, 2020.

[12] D. Vlachopoulos and A. Makri, *The effect of games and simulations on higher education: a systematic literature review*, vol. 14, no. 1. International Journal of Educational Technology in Higher Education, 2017.

[13] Y. M. Jumaa, S. M. Moussa, and M. E. Khalifa, "The main aspects of adaptive educational games for normal and disabled/disordered learners: A comprehensive study," *2017 IEEE 8th Int. Conf. Intell. Comput. Inf. Syst. ICICIS 2017*, vol. 2018-Janua, no. Icicis, pp. 348–355, 2017.

[14] M. Kang, S. K. Gonugondla, and N. R. Shanbhag, "Random Forest Classifier in 6T SRAM Array," no. c, pp. 263–266, 2017.

[15] X. Tan *et al.*, "Wireless sensor networks intrusion detection based on SMOTE and the random forest algorithm," *Sensors (Switzerland)*, vol. 19, no. 1, 2019.

[16] P. Zhang, Z. Y. Yin, Y. F. Jin, and T. H. T. Chan, "A novel hybrid surrogate intelligent model for creep index prediction based on particle swarm optimization and random forest," *Eng. Geol.*, vol. 265, p. 105328, 2020.

[17] P. Kim, *MATLAB Deep Learning: With Machine Learning, Neural Networks and Artificial Intelligence*. 2017.

[18] K. S. Bhargav, "Application of Machine Learning Classification Algorithms on Hepatitis Dataset," *Int. J. Appl. Eng. Res.*, vol. 13, no. 16, pp. 12732–12737, 2018.

[19] W. Muhammad, M. Mushtaq, K. N. Junejo, and M. Y. Khan, "Sentiment analysis of product reviews in the absence of labelled data using supervised learning approaches," *Malaysian J. Comput. Sci.*, vol. 33, no. 2, pp. 118–132, 2020.

[20] M. Bouazizi and T. Ohtsuki, "Multi-class sentiment analysis on twitter: Classification performance and challenges," *Big Data Min. Anal.*, vol. 2, no. 3, pp. 181–194, 2019.

[21] M. Sewak, P. Vaidya, C.-C. Chan, and Zhong-Hui Duan, "SVM Approach to Breast Cancer Classification," pp. 32–37, 2008.

[22] G. Zeng, "On the confusion matrix in credit scoring and its analytical properties," *Commun. Stat. - Theory Methods*, vol. 49, no. 9, pp. 2080–2093,

2020.