

Implementasi Ensemble Learning

No	Case	Teknik / Algoritma	Alasan Pemilihan Teknik/ Algoritma (Menurut Penulis)
1	Credit Card Fraud Detection	AdaBoost.M1	Most capable and practical boosting algorithm. (Barahim et al., 2019)
		Bagging Classifier (Random Forest)	Stable, Robust and Can Improve model performance. (Bagga et al., 2020)
		Gradient Boosted Trees	One of the techniques that has been widely used for classification. (Singhai et al., n.d.)
		Bagging ensemble classifier (Decision Tree)	Due to its simple implementation and the improving accuracy. (Zareapoor & Shamsolmoali, 2015)
		Weighted Voting	It offered the best results by weighting the classifiers and ensembles. (Rakhshaninejad et al., 2022)

Daftar Pustaka

- Bagga, S., Goyal, A., Gupta, N., & Goyal, A. (2020). Credit Card Fraud Detection using Pipeling and Ensemble Learning. *Procedia Computer Science*, 173, 104–112. <https://doi.org/10.1016/j.procs.2020.06.014>
- Barahim, A., Alhajri, A., Alasaibia, N., Altamimi, N., Aslam, N., & Khan, I. U. (2019). Enhancing the credit card fraud detection through ensemble techniques. *Journal of Computational and Theoretical Nanoscience*, 16(11), 4461–4468. <https://doi.org/10.1166/jctn.2019.8619>
- Rakhshaninejad, M., Fathian, M., Amiri, B., & Yazdanjue, N. (2022). An Ensemble-Based Credit Card Fraud Detection Algorithm Using an Efficient Voting Strategy. *Computer Journal*, 65(8), 1998–2015. <https://doi.org/10.1093/comjnl/bxab038>

Singhai, J., Gupta, S., Maulana Azad National Institute of Technology, IEEE Asia-Pacific Region. MP Subsection, IEEE Asia-Pacific Region. Bombay Section, & Institute of Electrical and Electronics Engineers. (n.d.). *Credit Card Fraud Detection on the Skewed Data Using Various Classification and Ensemble Techniques*.

Zareapoor, M., & Shamsolmoali, P. (2015). Application of credit card fraud detection: Based on bagging ensemble classifier. *Procedia Computer Science*, 48(C), 679–685. <https://doi.org/10.1016/j.procs.2015.04.201>