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- [7] F. Grassmann et al., "A deep learning algorithm for prediction of age-related eye disease study severity scale for age-related macular degeneration from color fundus photography," *Ophthalmology*, vol. 125, no. 9, pp. 1410–1420, 2018.
- [8] J. Karlin et al., "Ensemble neural network model for detecting thyroid eye disease using external photographs," *Br. J. Ophthalmol.*, 2022.
- [9] U. N. Wisesty, H. Priabdi, R. Rismala, and M. D. Sulistiyo, "Eye state prediction based on EEG signal data neural network and evolutionary algorithm optimization," *Indones. J. Comput.*, vol. 5, no. 1, pp. 33–44, 2020.
- [10] Ö. F. Ertuğrul, "A Single Hidden Layer Artificial Neural Network Model that Employs Algebraic Neurons: Algebraic Learning Machine," 2021.
- [11] T. G. Dietterich, "Ensemble methods in machine learning," in *International workshop on multiple classifier systems*, 2000, pp. 1–15.
- [12] L. Breiman, "Bagging predictors," *Mach. Learn.*, vol. 24, no. 2, pp. 123–140, 1996.
- [13] C. N. Silla and A. A. Freitas, "A survey of hierarchical classification across different application domains," *Data Min. Knowl. Discov.*, vol. 22, no. 1, pp. 31–72, 2011.
- [14] R. Asgarnezhad, "SRV: A Striking Model based on Meta-Classifier for Improving Diagnosis Type 2 Diabetes," *Journal of Advances in Computer Research*, vol. 13, no. 2, pp. 1-13, 2022.
- [15] R. Asgarnezhad, and A. Monadjemi, "NSE: An effective model for investigating the role of pre-processing using ensembles in sentiment classification," *Journal of Advances in Computer Research*, vol. 12, no. 3, pp. 27-41, 2021.

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