

I.E. Livieris, L. Iliadis, P. Pintelas. [On ensemble techniques of weight-constrained neural networks](#). Evolving Systems, 2020.



Abstract - Ensemble learning constitutes one of the most fundamental and reliable strategies for building powerful and accurate predictive models, aiming to exploit the predictions of a number of multiple learners. In this paper, we propose two ensemble prediction models which exploit the classification performance of Weight-Constrained Neural Networks (WCNNs). The proposed models are based on Bagging and Boosting, which constitute two of the most popular strategies, to efficiently combine the predictions of WCNN classifiers. We conducted a series of experiments using a variety of benchmarks from UCI repository in order to evaluate the performance of the two proposed models against other state-of-the-art ensemble classifiers. The reported experimental results illustrate the prediction accuracy of the proposed models providing empirical evidence that the hybridization of ensemble learning and WCNNs can build efficient and powerful classification models.