I.E. Livieris, N. Kiriakidou, A. Kanavos, V. Tampakas, P. Pintelas. <u>On ensemble SSL algorithms for credit</u> problem

scoring

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Abstract - Credit scoring is generally recognized as one of the most significant operations research techniques utilized in bank ing and finance, aiming to identify whether a credit consumer belongs to either legitimate or suspicious customer group. With the vigorous development of the Internet and the widespread adoption of electronic records, banks and financial institutions have accumulated large repositories of labeled and mostly of unlabeled data. Semi-supervised learning constitute an appropriate machine learning methodology for extracting useful knowledge from both labeled and unlabeled data. In this work, we evaluate the performance of two ensemble semi-supervised learning algorithms for the credit scoring problem. Our numerical experiments indicate that the proposed algorithms outperform their component semi-supervised learning algorithms, illustrating that reliable and robust prediction models could be developed by the adaptation of ensemble techniques in the semi-supervised learning framework.