Case-Based Reasoning: A Hybrid Classification Model Improved with an Expert's Knowledge for High-Dimensional Problems

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Abstract : Data mining and classification of objects is the process of data analysis, using various machine learning techniques, which is used today in various fields of research. This paper presents a concept of hybrid classification model improved with the expert knowledge. The hybrid model in its algorithm has integrated several machine learning techniques (Information Gain, K-means, and Case-Based Reasoning) and the expert's knowledge into one. The knowledge of experts is used to determine the importance of features. The paper presents the model algorithm and the results of the case study in which the emphasis was put on achieving the maximum classification accuracy without reducing the number of features.