Swarm Intelligence Based Feature Selection for High Dimensional Classification: A Literature Survey

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Feature selection is an important and challenging task in machine learning and data mining techniques to avoid the curse of dimensionality and maximize the classification accuracy. Moreover, feature selection helps to reduce computational complexity of learning algorithm, improve prediction performance, better data understanding and reduce data storage space. Swarm intelligence based feature selection approach enables to find an optimal feature subset from an extremely large dimensionality of features for building the most accurate classifier model. There is still a type of researches that is not done yet in data mining. In this paper, the utilization of swarm intelligence algorithms for feature selection process in high dimensional data focusing on medical data classification is form the subject matter. The results shows that swarm intelligence algorithms reviewed based on state-of-the-art literature have a promising capability that can be applied in feature selections techniques. The significance of this work is to present the comparison and various alternatives of swarm algorithms to be applied in feature selections for high dimensional classification.