Abstract

This work proposes a bio-inspired based methodology in order to extract and evaluate user's web texts / posts. To validate the methodology, a dataset is constructed using real data arising from Greek fora. The obtained results are compared with a commonly used machine learning technique (decision trees- C4.5 algorithm). The bio-inspired algorithm (namely the hybrid PSO/ACO2 algorithm) achieved average classification accuracy 90.59% in a 10 fold cross validation experiment, outperforming the C4.5 algorithm (83.66%). The proposed methodology could be easily integrated with a decision support system providing services in the fields of e-commerce or e-government in order to help merchants acquire customer satisfaction or public administrators capture common understanding.

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Index Terms

Computer Science
Artificial Intelligence

Keywords
Artificial Intelligence  Bio-inspired Algorithms  Decision Trees  PSO/ACO2  Web texts  Web Opinion Mining