



A Case-Based Approach to Assess Employees' Satisfaction with Work Guidelines in Times of the Pandemic

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Abstract. The actual pandemic crisis posed new challenges for organizations that had to adapt new working procedures to prevent infection. In this context, monitoring employee satisfaction is paramount, but a very difficult task. To respond to this challenge, a workable problem-solving methodology was developed and tested. It examines the dynamics between *Logic Programming* and the *Laws of Thermodynamics for Knowledge Representation and Reasoning*. Such formalisms are consistent with a computer-based approach based on *Case-Based Reasoning*, the ultimate goal of which is to assess employee satisfaction in water analysis laboratories. The model was trained and tested with real data, collected through questionnaires, exhibiting an overall accuracy of 85.9%.

Keywords: COVID-19 · Human resources management · Organizational performance · Water laboratories · Case-Based reasoning