

A Case-Base Approach to Workforces' Satisfaction Assessment

Ana Fernandes¹, Henrique Vicente^{2,3}, Margarida Figueiredo^{2,4},
Nuno Maia⁵, Goreti Marreiros⁶, Mariana Neves⁷, and José Neves^{3(✉)}

¹ Organização Multinacional de Formação, Lisbon, Portugal
anavilafernandes@gmail.com

² Departamento de Química, Escola de Ciências e Tecnologia,
Universidade de Évora, Évora, Portugal
{hvicente, mtf}@uevora.pt

³ Centro Algoritmi, Universidade do Minho, Braga, Portugal
jneves@di.uminho.pt

⁴ Centro de Investigação em Educação e Psicologia,
Universidade de Évora, Évora, Portugal

⁵ Departamento de Informática, Universidade do Minho, Braga, Portugal
nuno.maia@mundiservicos.pt

⁶ Departamento de Engenharia Informática,
GECAD – Grupo de Engenharia do Conhecimento e Apoio à Decisão,
Instituto Superior de Engenharia do Porto, Porto, Portugal
goreti@dei.isep.ipp.pt

⁷ Deloitte, London, UK
maneves@deloitte.co.uk

Abstract. It is well known that human resources play a valuable role in a sustainable organizational development. Indeed, this work will focus on the development of a decision support system to assess workers' satisfaction based on factors related to human resources management practices. The framework is built on top of a *Logic Programming* approach to *Knowledge Representation* and *Reasoning*, complemented with a *Case Based* approach to computing. The proposed solution is unique in itself, once it caters for the explicit treatment of incomplete, unknown, or even self-contradictory information, either in terms of a qualitative or quantitative setting. Furthermore, clustering methods based on similarity analysis among cases were used to distinguish and aggregate collections of historical data or knowledge in order to reduce the search space, therefore enhancing the cases retrieval and the overall computational process.

Keywords: Human resources management · Logic programming · Case-based reasoning · Knowledge representation and reasoning · Decision support systems