

A Multi-criteria Approach for Team Recommendation

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Abstract

Team recommendation is a key and little-explored aspect within the area of business process management. The efficiency with which the team is conformed may influence the success of the process execution. The formation of work teams is often done manually, without a comparative analysis based on multiple criteria between the individual performance of the resources and their collective performance in different teams. In this article, we present a multi-criteria framework to allocate work teams dynamically. The framework considers four elements: (i) a resource request characterization, (ii) historical information on the process execution and expertise information, (iii) different metrics which calculate the suitability of the work teams taking into account both individual performance as well as collective performance of the resources, and (iv) a recommender system based on the Best Position Algorithm (BPA2) to obtain a ranking for the recommended work teams. A software development process was used to test the usefulness of our approach.

Keywords: Team recommendation | Resource allocation | Process mining | Business processes | Recommender systems | Organizational perspective

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