ROBOTIC PROCESS AUTOMATION:A SCIENTIFIC AND INDUSTRIAL SYSTEMATIC MAPPING STUDY

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ABSTRACT:

The automation of robotic processes has been experiencing an increasing trend of interest in recent times . However, most of literature describes only theoretical foundations on RPA or industrial results after implementing RPA in specific scenarios, especially in finance and outsourcing. This paper presents a systematic mapping study with the aim of analyzing the current state-of-the-art of RPA and identifying existing gaps in both, scientific and industrial literature. Firstly, this study presents an in-depth analysis of the 54 primary studies which formally describe the current state of the art of RPA. These primary studies were selected as a result of the conducting phase of the systematic review. Secondly, considering the RPA study performed by Forrester, this paper reviews 14 of the main commercial tools of RPA, based on a classification framework defined by 48 functionalities and evaluating the coverage of each of them. The result of the study concludes that there are certain phases of the RPA lifecycle that are already solved in the market. However,the Analysis phase is not covered in most tools. The lack of automation in such a phase is mainly reflected by the absence of technological solutions to look for the best candidate processes of an organization to be automated. Finally, some future directions and challenges are presented.