Chapter 7
Robotic Process Automation Practices in Big Data

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ABSTRACT

RPA, which stands for robotic process automation, is the business software category that has expanded at the most rapid rate in the history of the industry. The acronym robotic process automation (RPA) is quickly becoming a household name as it makes its impact in virtually every industry by facilitating the automation of labor-intensive and repetitive operations performed by humans more straightforwardly. The term robotic process automation refers to nothing more than a software solution that, in place of human intervention, imitates how humans interact with computing software and applications. RPA has already been implemented in virtually all repetitive business activities. Since we are currently living in the information era, there is an ever-increasing need for the extraction of patterns from raw data. As a result, there is a growing want for efficient tools to meet this demand.

INTRODUCTION

Robotic process automation (RPA) is a software technology that enables the easy development, deployment, and management of software robots that simulate human actions to capture and interpret applications to process a transaction, manipulate data, trigger responses, and also interact with other digital systems and software(Tailor, Pareek, et al., 2022). RPA can capture and interpret applications to process a transaction; manipulate data; trigger responses; and interact with other digital systems and software. RPA makes it possible to record and understand applications

so that a transaction may be processed, data can be manipulated, replies can be triggered, and other digital systems and software can communicate with one another. Software robots are capable of interpreting the things that are presented on a screen, completing accurate keystrokes, traversing systems, recognizing and extracting data, as well as carrying out a varied range of tasks in a manner that is comparable to that of humans. The same jobs that are done by people can be done more quickly and reliably by machines, without the danger of overexertion or the delay caused by breaks in the process. RPA is utilized by companies for several applications, including the automation of repetitive activities to check enormous data volumes to find information that is acceptable for human controllers. RPA is used throughout organizations for a wide number of reasons. Robotic process automation, often known as RPA, is a type of software that automates routine, time-consuming work by simulating the way humans interact with computer programs. RPA technology enables the creation of software programs or robots that can connect to applications, enter data, do calculations, carry out tasks, and replicate data across workflows or apps as they are working(Cooper et al., 2019).

Imagine a world where robotic process automation (RPA) isn't used. Because there would not be a simple way to automate the integration between the systems, the user would need to key in the information from documents like invoices into one system, and then key in the same information into another system. This would require the user to key in the information twice(L. P. Willcocks et al., 2015). This would be essential due to the lack of a straightforward method for automating the integration of the systems with one another. It greatly slows down corporate operations and produces a large level of frustration because it needs a significant amount of work on the part of users. When RPA takes over, the user will only have to enter the new invoice data once because it will be done automatically(Moffitt et al., 2018). During this time, though. After this is finished, the automation software will take over, at which time it will "scrape" the data that the user has entered from the displays, and then it will transfer this data into other systems that require it. After this, this process will be finished. In the following posts, we will discuss the applications of robotic process automation (RPA) in the field of data analytics as well as the benefits that RPA has to offer in the realm of Big Data(Geyer-Klingeberg et al., 2018).

ETL, Robotic Process Automation (RPA), and Artificial Intelligence are the three components of a tools architecture that the IT department should consider before beginning RPA implementation(Tailor, Goyal, et al., 2022).

ETL: It is recommended that you use an extract, transform, and load (ETL) tool at the front end of an RPA process that uses big data. This tool should be able to integrate with and take in the incoming streams of raw and unstructured data that you receive from all of your suppliers. ETL is an abbreviation for extract, transform, and load. This tool is intended to extract the data that is pertinent to your business

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