Automation of New Age Technology Transition to Experienced People

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ABSTRACT: The importance of automation in the Information Technology has dramatically increased in recent years. With the rise of technology and robots, involvement of humans in the technology and other processes are slowly diminishing. The process of human actions mimics by robots is termed to be automation. In today's world, many people are being recruited for performing various repetitive tasks in an organization which involves both manual work and time. The cost involved for performing this manual tasks is even high.

This project aims to recommend New Age Technologies to the associates, such as Robotic Process Automation (RPA), Artificial Intelligence (AI), Automation Testing, Big Data, Blockchain Developer for the experienced associates to cope up with the future technologies and projects. This is the right to expand skill sets across domain. Any technical professional, should learn New Age Technologies to stay relevant and this helps to associates career in such a way that they are recommended with new technologies and help them in not being outdated in the future projects involved with their organization.

KEYWORDS: UiPath, New Age Technology, Transition, New Age, RPA, Automation.

I. INTRODUCTION

   Robotic Process Automation (RPA) is the application in digital world that allows personnel in an organization to configure a 'robot' to solve an existing manual problems and communicating with other digital systems. RPA is used to automate the front and back office process. RPA main goal is to replace repetitive and important tasks which are performed by humans. This RPA technology can be applied on wind range of industries, like Process Automation, IT Support and management, Automated assistant,Health care, Insurance etc.

   The RPA Tool UiPathis used to implement the Robot to recommend New Age Technology to Experience Persons.UiPath tool used to automating the business processes, with the help of this tool so many critical and repetitive tasks of the organizations can be automated. Thus, helping the human strength to be involved in some other processes for better use. In IT industry everyone trying to predict   what will happen in career. If we looking new professional career in IT field with relevant experience and your ambition to learn new things, then one of these New Age Technology Transition to you. While New Age Technologies such as Blockchain, Cryptocurrency, Artificial Intelligence, Automation Testing, Data Scientist, Cloud Computing, Robotic Process Automation, The Internet of Things, BigData era, etc. would be the future, they could open up job opportunities.

II. RELATED WORK

   Automation is word which is being heard from last 30 years and it uses instructions to create a repeated process that replace a IT professional's manual work in IT industry [1]. Robotic Process Automation can do repetitive tasks more quickly, accurately and it can do back-office works of commercial and IT industries. Automation can be categorized into two types like Soft and Hard Automation [2]. Robotic Process Automation allows anyone to configure a robot to emulate the human interacting with digital system.

There are multiple tools which are being used by RPA such as UiPath, Automation Anywhere, Blue Prism, Workfusion, Redwood, etc. [3].

The right time to expand should learn skill sets across domains. Any tech professional, should learn New Age Technologies to stay relevant and take advantage of emerging opportunities [4].

In this paper, we recommend These New Age Technologies to experience people with related old age skills and sent personal mail of recommended New Skills to every employee.

III. METHODOLOGY

Installation of RPA Tool UiPath for Automate business processes and repetitive tasks within Enterprises. This RPA Tool UiPath contains Three main components such as UiPath Studio, UiPath Robot, UiPath Orchestrator.

-UiPath Studio: design automation processes in a visual manner.

- UiPath Robot: Robot executes the processes built in studio

-UiPath Orchestrator: Orchestrator is a web based application that enables us to deploy, schedule, monitor and manage Robots and Processes.

In this paper UiPath is used to Designed Robot which is recommended New Age Technologies to Organizational personnel. Here we're gathered organizational employee's data in Excel format, other side New Age Technological Data has gathered from different job portal sites by using uipath data scraping activity and built as excel format.

	A	B	C	D	E	F
1	EmpId	EmpName	Email_ID	Experience	Technical_Skills	Tech_Count
2	112644	srikath sabbarapu	KK00112644@Company.com	6	HTML,JavaServer Faces (JS	5
3	114403	srinivasulu g	SS00114403@Company.com	6	Oracle-Development,Orac	2
4	124074	Mani kumar	LC00124074@Company.com	14	.NET Framework version 8	10
5	125750	Ravi Kumar	AM00125750@Company.com	6	Informatica-BI Tools	1
6	126724	Sagar	SG00126724@Company.com	6	Teradata-BI	1
7	127292	Ebenezer kotnala	sabin@Company.com	13	HP -UFT-formerly QTP	1
8	128760	Kalpana,Narkuda	NK00128760@Company.com	5	Java Enterprise Edition	1
9	129090	Malreddy,Deepika Reddy	MR00129090@Company.com	5	E2E Assurance	1

Fig.1: Employee Old Skill Data (Emp.xlsx)

Above figure (Fig. 1) shows Employee old skill data, below table (Table. 1)show meanings of Column Names

S.No	Column Name	Meaning
1	EmpID	Employee ID
2	Empname	Emplpyee Name
3	Emil_ID	Email ID
4	Experience	Industrial Experience
5	Technical_Skills	Old Skills
6	Tech_Count	Number of old skills count

Table. 1: Employee old skill column meaning

This figure (Fig.2) shows New Age Technology Data with column meanings shows in below table (Table. 2).

	A	B	C	D
1	**New_Technology**	**Skills_Required**	**MinExp**	**MaxExp**
2	Data Scientist	Algorithms, Data Structures, Machine Learning, Python, R, E	2	5
3	Data Scientist	Algorithms, Data Structures, Machine Learning, Python, R, E	2	5
4	Data Scientist	analytics, data science, data modeling, predictive modeling...	5	10
5	AWS Professional with Bigdata	aws, amazon web services, bigdata, RED shift, Redshift, Lan	6	9
6	bigdata/aws Developers	AWS, Java, Linux, Python, Javascript, Docker, microservice	5	10
7	Talend and Talend Bigdata- Developers / De	big data, data integration, talend, data quality, coding, designi	8	13
8	Bigdata Engineer	Bigdata, Hadoop, Spark Framework, Programming, Scala...	4	9
9	Bigdata - Principal Consultant	BigData, Java / JEE, Agile, open source frameworks, Java / .	9	12
10	Data Science Manager	Business analysis, Analytical, Data collection, Predictive mod	6	10
11	Data Scientist	c, algorithms, python, r, product sales, java, neural networks.	2	5

Fig. 2: New Age Technology Data (NewAge.xlsx)

S.No	Column Name	Meaning
1	New_Technology	New technologies names
2	Skills_Required	New skills required for transition
3	MinExp	Minimum experience for transition
4	MaxExp	Maximum experience for transition

Table. 2: New Age Technology Column meaning

The two different files such as Emp.xlsx and NewAge.xlsx comparing each other, if any old skill is match with any New Age Technology of NewAge.xlsx, with following condition (Fig.4), and this has to recommended to matched old skills. Once it completed, automatically sent recommended New Age Technology to professionals. The individual recommended mail look like (Fig. 5).
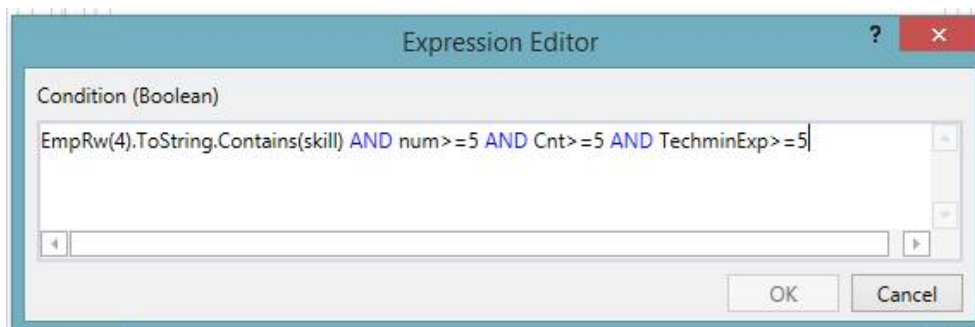

Fig.3: Condition for comparing two excel data to recommends New Age Technology

Fig.4: Overview of Workflow Process
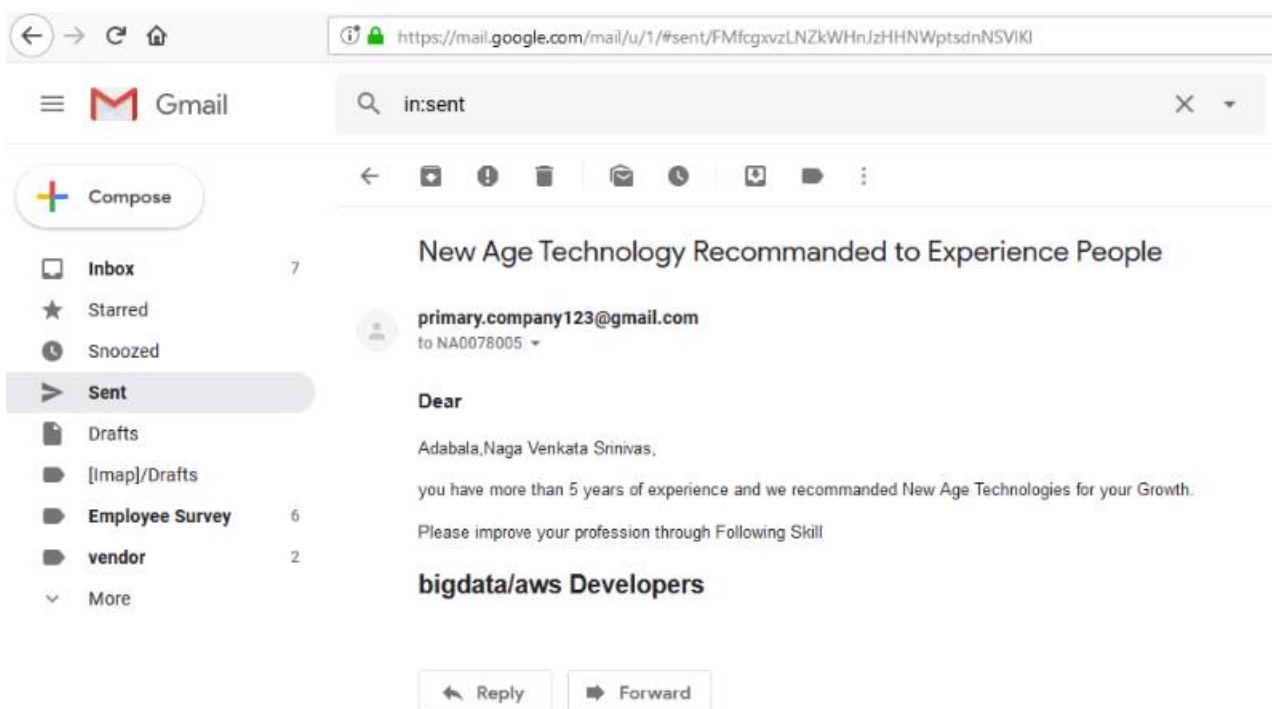
Fig.5 Recommended Mails sent to individual by Email Automation

IV. RESULTS

Uipath used to implement this New Age Tech process manual execution time is "00:02:28". The New Age Technology workflow process that runs in UiPath's execution agent, which is UiPath Robot. Figure 7 presents the UiPath orchestrator is web based console which is monitor and scheduling jobs through Environment, once robot is defined at local machine, Orchestrator is connected to local machine for scheduling the execution of Robots(jobs).
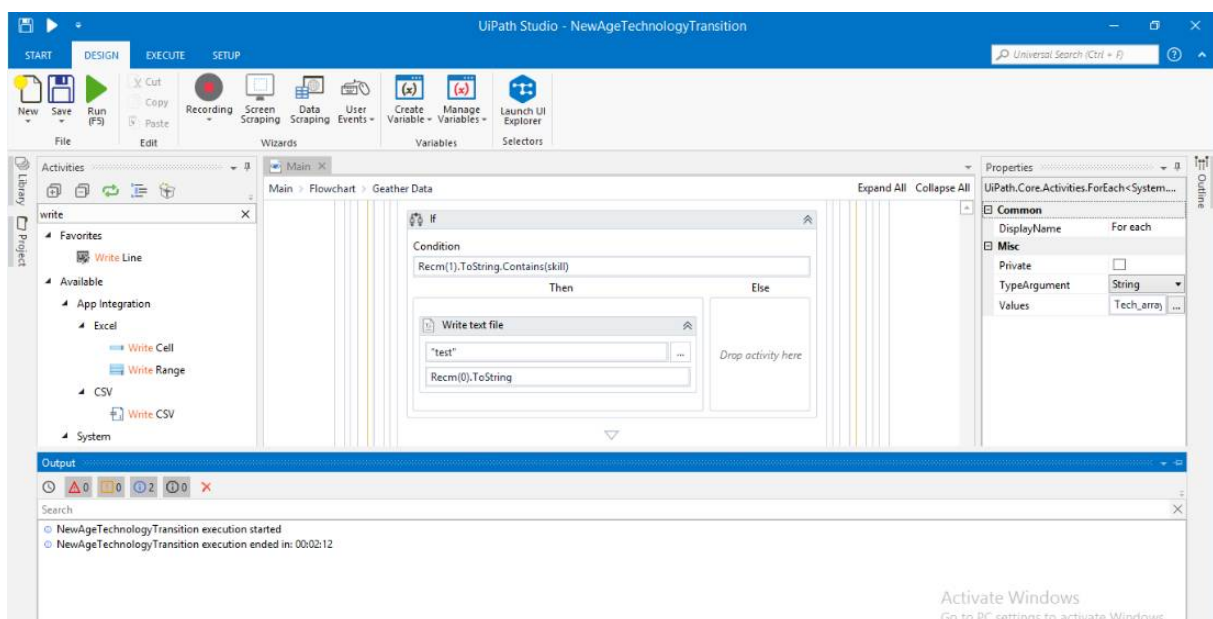
Fig.6: Manual Execution time of process

Above figure 6 show the manual process execution time, but in UiPath Orchestrator Schedulers are used to preplanned the job execution.
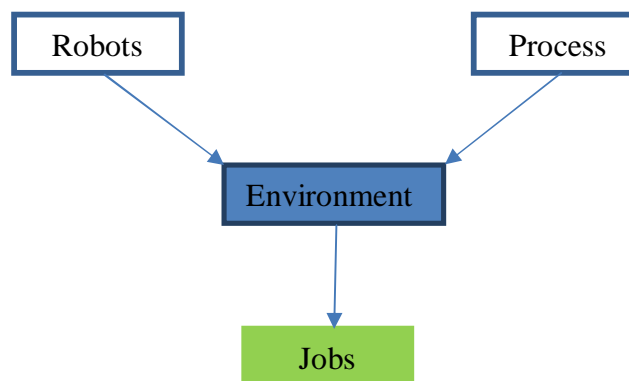
Fig.7 Overview of UiPath Orchestrator

Above Figure (Fig.7) shows the Orchestrator overview, here *Robot* is run the processes which are built in UiPath Studio, Environment is grouping the Robots for job Execution. Job is execution of process on one or more Robots.
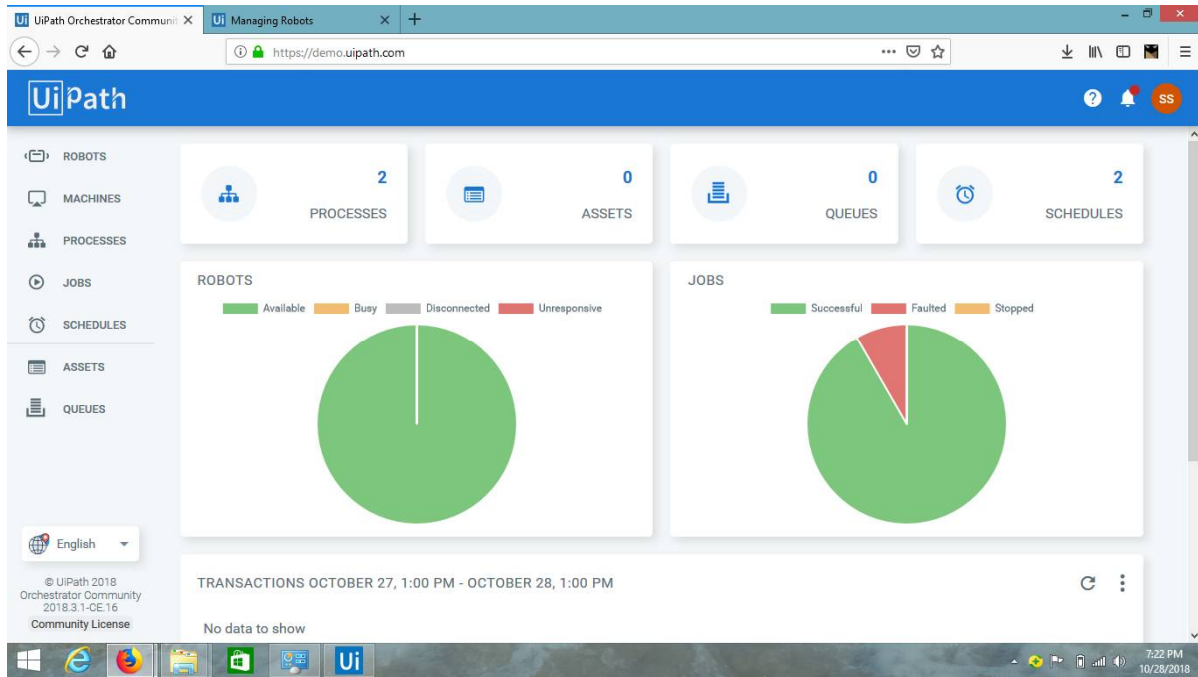
Fig.8 Orchestrator web console monitoring the Robots and Jobs

UiPath Orchestrator web console shows in Figure 8, it orchestrates the Robots to executing the repetitive processes. Here, Orchestrator executing the job Process on one or more Robots.

Fig. 9: Recommend New Age Technology to Employees along with Old Skills

Above Figure 9 presents the New Recommended Skills for Employeesbased on Experienceand Old Skills.

V. CONCLUSION

With the help of Robotic Process Automation, we deploy Artificial Robots with the help of machine learning and AI, the robots are scheduled to do the job which are human perform in an error free and low cost manner.

This paper recommends New Age Technology to the associates who has to update their skills in the new programming languages or tools which are necessary for the associates in growing their career and even helping the overall growth of the organization.

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