

A comparative study between UiPath vs Automation Anywhere for RPA Developer

Akshay Vijay Bhor, Student, Bharati Vidyapeeth, Navi Mumbai, India, akshaybhor64@gmail.com

Dr.Kirti Muley, Assistant Professor, Bharati Vidyapeeth, Navi Mumbai, India, ikirti@gmail.com

Abstract- In recent years several of organization desires to automate their process using the Robotics Process Automation tools. If the person is having No knowledge about the RPA tools and wants to become an RPA developer so it will be confusing. Currently, there exist various automation tools which are used according to the requirements. This research aims at the working and the comparison of the two most popular automation software in India, i.e. UiPath and Automation Anywhere. In this paper, we go through the features, usability, pricing and more from the viewpoint of a small and medium-sized business in India. This will be helpful for choosing a perfect tool for becoming an RPA developer. It is observed that UiPath is comparatively better for both RPA developer & organization.

Keywords– Attended Bot, Automation Anywhere, RPA (Robotics Process Automation), Un-Attended Bot, UiPath.

I. INTRODUCTION

Robotics Process Automation (RPA) has become a booming technology in the IT sector. As it provides better scalability and time efficiency with less error all the major organizations serve to automate their process. Even small companies serve to automate their process as using the RPA tool. There exist various tools for providing the automation process. Although only three leading companies are providing the most top notch RPA technology.

RPA is the next future for repetitive or mundane tasks. In the manual process for capturing the data requires human resources that cost expensive to the organization in terms of organization financial aspects. RPA provides better productivity rates with faster execution, less error and it is less costly as compared to human operators.

It is difficult to identify the tool for automation tools which is best suited for both RPA developer and organization for the future enhancement of those automated process. This paper aims to compare the top two leading software which is available for the RPA developer for the creation of automated process. Section II gives a brief introduction about RPA along with the ways through which automation process can be achieved i.e. Attended bot & Un-Attended bot. In Section III, a comparison of UiPath & Automation Anywhere is presented. The criticality of UiPath for RPA developer is given in Section VI. Various reasons are depicted in Section V to choose UiPath over Automation anywhere as an automation tool for RPA development. Finally, Section VI presents the conclusion.

II. RPA (ROBOTICS PROCESS AUTOMATION)

A Robot is a software application that automates the tasks or process that is tedious and time-consuming. It also helps to reduce the actual cost of the process which previously used to be done by the human data operators.

The RPA is not code based process to provide automation to any task. It actually contains some predefined modules or activities provided in RPA tools by their software companies. The robots can be trained to automate a process or an RPA developer can provide a workflow sequence that replicates the process as data entry operators.

RPA can be implemented in the front-end as well as back-end process with or without the help of human interaction. The Front-End automation can be done using human interaction which will be user-friendly and time beneficial factor for the organization [1]. The Back-End automation does not require human interaction so it can fully automate which will provide precise and accurate data 24*7 without any error or hesitation.

RPA provides various types of automation such as Desktop, Web, Citrix, Email, etc. Using this various RPA developers provides an automated process to an organization. That can be run on the user's pc, laptop or mobile devices.

The main goal of RPA is to free those data entry operators who do the same tedious, boring and mundane tasks on their daily basis which is performed on the virtual systems. RPA does not need code based development to provide automation to any process.

- **Robotic** is a term in which does the same job as the human does.
- A **process** is a flow of execution that leads to providing meaningful data. For example the process of making a cake.
- **Automation** is an activity that provides data automatically without or with some human interaction.

Some RPA tools which are available in the market:-

1. **Leader:-**
 - a. UiPath
 - b. Automation Anywhere
 - c. Blue Prism
2. **Performers:-**
 - a. NICE
 - b. WorkFusion
 - c. EdgeVerve
 - d. Kyron
 - e. Pegasystems
 - f. Redwood
3. **Contender:-**
 - a. Contextor
 - b. Kofax
 - c. Softomotive

Many of the RPA vendors provide Web Automation, Desktop Automation, and Citrix Automation. In automation, any recurring process can be done with the help of the Attended Bot, Un-Attended Bot.

There exist various companies that do the recurring or mundane tasks on the desktop application or on the web application such as scraping of data or putting some data on the multinational software corporation that makes enterprise software to manage business operations and customer relations. The Recurring process is the same task that is carried out on the daily basis of that organization.

2.1: Attended Bot:

Attended Bot requires a human operator to interact with the attended bot when any process needs attention by the human operator. Attended automation comes into the picture when an employee triggers any button, events, specific action. While providing the attended bot automation workflow of the automation process should be user-friendly & in perfect synchronization so that no error will be occur during the automated process [2].

Attended Bot explore the following basics:

- Attended Bot provides tasks to an individual human operator or an employee.

- Employee provides the action to attended bot to automate the tasks.
- Employee triggers attended bots through some actions to automate tasks at any time.
- Attended automation provides better productivity & also provides a helping hand to those human operators or an employee.

Basically, the attended bot operates under the employee's direction.

2.2: Un-Attended Bot:

Un-Attended Bot doesn't require humans to automate the process [2]. In Un-Attended automation, the bot triggers itself when the scripts run and capture all the required data or run as per the Scripts are developed.

In a larger organization the back-office data are automated using the Un-Attended bot which provides better performance than the data operators. It takes less execution time with better productivity rates & error-free data.

Un-Attended Bot explores the following basics:

- Un-Attended bot Automate back-end processes at large scale.
- Provisioned based on rule-based processes.
- Un-Attended Bot does not require any human interaction to automate the process.
- This type of automation frees data entry operator from the mundane tasks & also provides better performance without any error.
- It also automates the process in a less cost scenario than the actual manual tasks.

Basically, the Un-attended bot follows your rules to complete processes automatically

A. Automation Anywhere:

- Automation Anywhere was introduced by founder Mihir Shukla in 2003.
- This automation tool was originally founded as Tethys Solutions, LLC in San Jose, California by Ankur Kothari, Mihir Shukla, Neeti Mehta, and Rushabh Parmani [8].
- In the later year of 2010 company rebranded itself as Automation Anywhere. With operation in over 10 countries, the software company develops products that adapt to robotic process automation technology in leading financial services, business process outsourcing, healthcare, technology, and insurance companies.
- Automation Anywhere RPA tool that combines conventional RPA with intellectual elements like language understanding and reading any unstructured data.

B. UiPath RPA Software:

- UiPath was introduced by the Romanian entrepreneurs, Daniel Dines, and Marius Tirca in the year of 2005[3]. This is a global software company that develops a platform for Robotic Process Automation (RPA or RPAAI).
- In March 2019 Dev-Conference, it was noted that UiPath was in talks to raise over \$400 million in its financial growth and with the total valuation that could reach \$7 billion [3].
- A Product that is introduced by UiPath is UiPath Studio, Orchestrator, and Robot.
- In 2019, UiPath Developer Conference UiPath has announced several new updates in their software :
 1. Artificial Intelligence and machine learning activity to read the images fields.
 2. New updates for orchestrator.
 3. Improved viewing of reports.
 4. Artificial Intelligence for new cognitive analytics.

III. BRIEF ON AUTOMATION ANYWHERE AND UIPATH

A. Technology

- UiPath Provides various types of automation like Desktop automation, Web Automation, GUI Automation, Screen Scraping, Citrix Automation, Mainframe Automation, SAP Automation, Excel Automation, Macro Recorder. It uses simple and user-friendly drag and drops activities to build the scripts or to build automated processes or tasks [4]. To provide automation using UiPath doesn't require any programming knowledge. It means that non-programmer with 0 % of programming knowledge can also simply build automated processes or scripts in UiPath. The scripting of the automation process is done on the desktop application but the robot can be initialized using orchestrator on a desktop as well as on the Mobile.
- Automation Anywhere also provides various types of automation like Desktop Automation, Web Automation, Citrix Automation, SAP Automation, Excel Automation, and Macro Recorder. It uses Developer Friendly activities to build the scripts or to build automated processes or tasks. To provide automation Developer requires some coding knowledge to be able to build automated tasks or processes. Not everyone can build automated tasks in this software easily and efficiently.

The scripting of the automation process is done on the desktop application but the robot can be initialized only using the desktop application.

B. Features

UiPath has the following features:

- UiPath can be executed on the virtual machine or on the cloud also.
- UiPath provides better support for the development of Citrix automation using web automation and desktop automation [6].
- Auto Login Features also runs on the Orchestrator.
- UiPath provides better scraping solutions of the web, desktop with fewer error data.

Automation Anywhere can be seen in the following features:

- Automation Anywhere provides intelligent adapters for business and its operations.
- Uses SMART Automation Technology
- It quickly automates complicated tasks.
- In automation anywhere we can distribute our tasks very easily.

C. Cost

- The UiPath provides free unlimited days of Community Edition for the Developer. The licensed version of the UiPath software may vary as per the studio, Robots, and Orchestrator [7].
- The Automation anywhere provides only 30 days trial for the Community Edition. The licensed version of Automation anywhere may vary as per the software and robots [7].

Comparison between Automation Anywhere and UiPath

The comparison between both the software's and their services in a broader perspective is shown below in the table. Feature compared between both are the basic requirements and needs for Automation software.

Table 3: Comparison of Leading Automation Software.

Sr No	Feature Comparison	UiPath	Automation Anywhere
1	trial version	Available	Not available
2	Community Edition	Available Free for lifetime	Available For 30 days
3	Market Trends as per google	Most Popular Tool	Least Popular Tool
4	Based Technologies	Based On Kibana SharePoint	Based On Microsoft

		Elasticsearch	
5	Architecture Type	Web Based Orchestrator	Client based Architecture
6	RPA development	User-Friendly with Drag & drop Functionalities	Developer Friendly [Script based]
7	Programming Skills	Does Not Require Coding	Required To use activities
8	Accessibility	Mobile & Browser accessibility	Application Based
9	Re-Usability	Scripts Are grouped in library.	Scripts are created using adapters.
10	Recorders	Basic & macro recorders	Basic & macro recorders
11	Robots	Front & back automation	Front & back automation
12	Accuracy	Citrix Automation designed for BPO	Reasonable Across Mediums
13	Operational Scalability	Crashes in medium level projects	Limited large scale robot deployment
14	Community & support	Available	Available
15	Jobs As RPA developer	Available in large scale	Available in large scale
16	Mobile App	Available	Recently available
17	Orchestrator	Available	Not available
18	Online Training	Available on their Site	Not available
19	Certification for RPA Developer	Available Free of costs	Available for 50\$

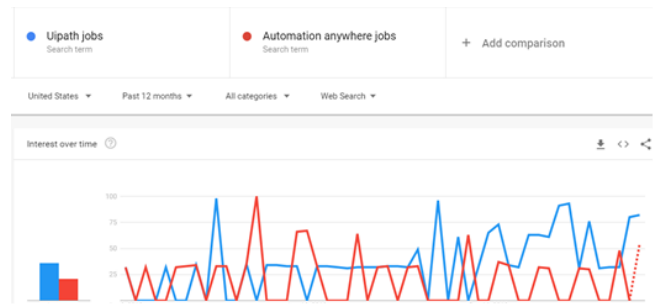


Fig.4.2: Google Trends for Most Searched Terms as per RPA Jobs.

UiPath as an RPA tool is currently used in many sectors like Healthcare, Recurring process, Finance & Banking, Insurance, Telecom, Manufacturing, Public Sector, Retail also mainly focused for BPO sector providing Citrix automation [5, 9]. With this kind of variety, the job opportunities for RPA development increased and also most of the leading as well as small firms are hiring a huge number of RPA developers for their organization. Most of the opportunities are available for UiPath as software.

With the easy drag and drop activities, the developer can build or provide an automated process in less time. Even the testing of the process becomes simple with the build in features of Debug which can be tested with slow motion feature which slowly debugs the automated process so that developers can understand the flow of the process.

UiPath has a large amount of community support as their own forum where a developer can resolve their doubts by posting their questions or doubts on the forum and UiPath experts or other community members will try providing a perfect answer regarding that doubts [6]. So that way you will not be stuck anywhere while creating any automation of the process. It also provides its own academy which helps RPA developer to understand the total features and the software of the UiPath [9].

Even UiPath provides free certification after each module gets completed. So that way they RPA developer can show their certification while going for the job interviews.

IV. HOW UIPATH SOFTWARE WILL BE CRUCIAL FOR RPA DEVELOPER.

The UiPath as an RPA software is currently most searched on the web as per the google trends since 2018 as shown Fig.4.1. Also, most of the companies are now hiring RPA developer for the UiPath software as shown in Fig.4.2.

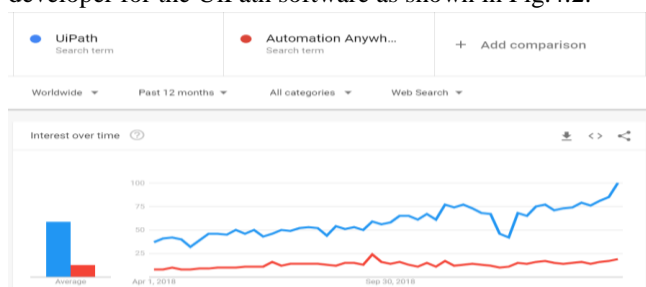


Fig.4.1: Google Trends for Most Searched Terms as per RPA Software.

V. WHY CHOOSE UIPATH OVER AUTOMATION ANYWHERE

As it concerns with Automation Anywhere the company reports state that its software is used by more than 1 Million customers. Even After such a huge audience, the software isn't up to the expectations for the business. Whereas UiPath has more than 3.7 million users over the globe providing seamless and Interactive automation with the help of Business Intelligence. As it concerns with UiPath the company reports state that its software In March 2019, it was noted that UiPath was in talks to raise over \$400 million in its Series D and with a total valuation that could reach \$7 billion & used by more than 1 Million customers.

The biggest drawback with the Automation Anywhere software is that the developer needs some technical knowledge and to create an automated process using this software requires good programming knowledge [8].

Where UiPath is providing drag and drop features to their developers hence to create some automated process that is a developer doesn't require any programming knowledge. UiPath also provides its own RPA academy where a developer can learn easily about the UiPath software and about its orchestrator. It also provides free certification to their users which will be beneficial for the users.

So the important points to choose UiPath over Automation Anywhere will be:-

1. UiPath is a User-friendly tool, where automation can be build using drag & drop functionalities.
2. UiPath provides lots of frameworks as well as automation environments for building an automated process.
3. UiPath is easy to learn & also provides free online academy for RPA developer also it provide free certification which will be essential for new RPA developer.
4. UiPath has a huge amount of community support which provides a helping hand for the new RPA developer to solve their problems.
5. UiPath doesn't require coding knowledge or coding skill to build an automation process.

As the automation part, both the software's are remarkable for the standard of RPA development. But in recent time UiPath has taken huge popularity and recognition in the market. Also, the UiPath is bringing top-notch updates to their software, so that they will be able to become No1 in the RPA development league.

VI. CONCLUSION

UiPath software is a user-friendly tool, the tool makes it efficient and reliable to use over various browser like Chrome, Firefox. Edge etc. without any limitations. In UiPath data synchronizations across various automation, processes are fast and take minimal latency allowing seamless automation of the data.

UiPath as an automation software tool is simple and efficient as per features as compared to Automation Anywhere. This software is easy and requires no special training to be used. It can be used on either on Desktop mode or online mode as per the business requirements. The software also offers a mobile application to access the data.

There are options to buy the full version licensed product according to the business needs. The cost seems reasonable and relevant as compared to the capabilities of the product& the pricing of Automation Anywhere. The

software can process the data into useful business intelligence eliminating the need for data entry operators. This paper helps to observe that UiPath is comparatively better for both RPA developer & organization than Automation Anywhere as per its Technology, Features, and Cost.

REFERENCES

- [1] <https://www.edureka.co/blog/what-is-robotic-process-automation/>
- [2] <https://www.UiPath.com/blog/unattended-attended-automation>
- [3] <https://www.UiPath.com/product/robots>
- [4] <https://www.softomotive.com/attended-unattended-RPA-missing-half-story-half-gains/>
- [5] Sanjay p Shreenivas Robotic Process Automation (RPA) – An Automation Tool Used In Software Industries for Development of Finance Project. <https://www.ijraset.com/fileserve.php?FID=11754>
- [6] Article by CFB Bots https://medium.com/@cfb_bots/11-mostly-free-resources-to-kick-start-your-robotic-process-automation-journey-4295de914f5e
- [7] Brain, David. "RPA Technical Insights, Part 3: Assisted or Unassisted Robotic Process Automation: How to choose the right delivery model for your project". <https://blog.symphonyhq.com/RPA-technical-insights-part-3-assisted-or-unassisted-robotic-process-automation-how-to-choose-the-right-delivery-model-for-your-project>
- [8] <https://www.automationanywhere.com/robotic-process-automation>
- [9] Technologies, AIMDek (2018-08-29). "Evolution of Robotic Process Automation (RPA): The Path to Cognitive RPA". Medium. Retrieved 2019-01-28. <https://medium.com/@AIMDekTech/evolution-of-robotic-process-automation-the-path-to-cognitive-RPA-c3bd52c8b865>