

Internship on Utilizing RPA to Improve Efficiency in IT Operations

by

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An internship report submitted to the Department of Computer Science and
Engineering
in partial fulfillment of the requirements for the degree of
B.Sc. in Computer Science

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Declaration

It is hereby declared that

1. The Report submitted is my own original work while completing degree at Brac University.
2. The Report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. We have acknowledged all main sources of help.

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Abstract

Robotic Process Automation (RPA) is the practice of automating repetitive and rule-based processes inside an organization using software robots or bots. It boosts productivity and efficiency by reducing human error and providing better accuracy and quality. It also provides a flexible and scalable approach for managing IT operations, allowing for faster data processing, system monitoring, and report generation. Moreover, RPA automates repetitive processes, freeing up IT teams to focus on higher-value work and reducing mistakes and rework. It also helps ensure compliance with laws and policies. Various RPA tools are currently in use. For example: UiPath, Automation Anywhere, Blue Prism, Power Automation etc. By using these tools and implementing it we can reduce manual effort, increase accuracy, enhance productivity, increase compliance and security, better customer experience etc. Basically, we work more with UiPath which is a RPA platform with a visual interface and drag-and-drop functionality, supporting a variety of applications and systems, and providing AI capabilities for intelligent automation. An internship in automation seeks to improve problem-solving skills, learn about automation ideas and technology, work in a team setting, participate in actual projects, get mentoring and supervision, and become familiar with business procedures.

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Chapter 1

Introduction

1.1 About Internship

This essay introduces the internship goal which can be defined as the chance to apply the skills that students have learned in the classroom. A planned and supervised employment program known as an internship gives students or other people practical terms, and practical experience in a particular subject or sector. Internships are often short-term work that may or may not be remunerated depending on the institution, the sector, and regional employment laws. In this way, students get the chance to develop their strengths, get a sense of the workplace, and gain the professional expertise of an instructor. Companies might have a wide range of criteria and application procedures. Applicants usually need to fill out applications, go to assessments, and, in some situations, submit a CV and cover letter to get an intern position.

Students at BRAC University are required either doing an internship or doing a project for students. Interns get the opportunity to establish connections with expert workers and a constructive environment which may result in possibilities for future employment or guidance. On account of this, an internship position is a valuable set of circumstances for a student. Those who are interested in conducting an internship are given the necessary assistance by the organization and are inspired to learn as much as they can from their workplace. The academic internship period usually depends on the institutional program which may vary from a few weeks to a few months. Whereas, BRAC University requires that students must have earned more than 72 credits and must complete an internship at a respectable organization that lasts for six months to qualify.

Accordingly, I took possession of an internship opportunity for myself to build up practical experience which will allow me to research several sectors and career opportunities before settling on a permanent employment opportunity. Being a student of BRAC University, I chose to do a project at DataFort Limited for my internship over writing a thesis paper. Since a multinational company has the potential to lead a fresh graduate in this competitive job sector, I preferred DataFort Limited for my future growth. As the world has become digitized day by day, reducing human effort and transforming to automation or AI technology, in my view, this field has the potential ability to guide me.

1.2 About this Report

The goal of this paper will explore my experience in the workplace through which BRAC University will be able to investigate my professional growth in this chosen field. Since, this is a compulsory procedure to conclude my bachelor degree, I tried to focus on the academic requirements. Moreover, this paper will manifest a detailed, structured, and straightforward analysis based on the outcomes of my professional performance.

1.3 Objectives

The goals of a thesis paper often change based on the subject of the research, and the instructions given by the academic regulations. The following are some typical goals of a thesis paper:

Vision This report's primary goal is to illustrate my professional growth and the information I have expertise which will give a better understanding of my research.

Specific Goals

The specific goals for this report includes:

- To represent the organization's mission and vision
- Role of RPA as an efficient task
- The professional growth as an individual.
- Flexibility along with the company goals.

1.4 Methodology

This research paper combines methods and processes that I have managed to carry out my research and collect information during my internship period at DataFort Limited. This will give a clear overview to the supervisor regarding the management of my research. Most of the data includes my experience from the professional environment.

Primary Data

- Practical observations from the work experience.
- Conference session with teammates.

Secondary Data

- Conducted RPA online courses.
- Publicly available data teammates.
- Online sources.

Chapter 2

Company Profile

2.1 Overview

In 2014, DataFort Limited was founded in Bangladesh. It is a franchisee of InfoFort, formerly known as IronMountain. Enterprises in Bangladesh may benefit from DataFort's technological knowledge and international standards for safe document management and preservation. At DataFort, businesses are productive and flexible via digital transformation. They assist companies in becoming cost-effective and compliant by reducing the administrative restrictions and utilizing low-code automation. They are Bangladesh's fastest-growing solutions provider, having been around since 2014. They are also present in the United Arab Emirates, Pakistan, Vietnam, Cambodia, the Philippines, Indonesia, and India. As the leading provider of records management and technology solutions throughout North and Latin America, Europe, Africa, the Middle East, and Asia, they are a partner of Iron Mountain. Besides, they also work with leading OEMs of software solution providers globally as implementation partners. Many enterprises in Bangladesh have benefited from the services and software solutions offered by DataFort Limited in terms of records management, digital transformation, and automation. Its clientele includes local and international banks, non-banking financial institutions, manufacturing and service-oriented businesses, telecommunications companies, merchants, pharmaceutical companies, hospitals, government agencies, and NGOs, among others. It is a market leader in Bangladesh's records management sector and one of the organizations with the greatest growth rates.

2.2 Organizational Goals and Tagline

DataFort focuses on full paperless office services that include business content, digitalization, and both digital and offline record management. Their offerings also include robotic process automation (RPA) for operational effectiveness, the supervision of online board conferences, and automated processes. They also specialize in the management of fixed investments, online education programs . DataFort is committed to assisting any organization's progress toward digital transformation by emphasizing professional services and secure cloud-based storage, assuring simpler operations and improved data management.

2.3 Services Offered

DataFort provides a wide variety of paperless office solutions, such as:

- To represent the organization's mission and vision.
- Management of physical and digital records (archiving).
- Management of physical and digital records (archiving).
- ECM/DMS stands for enterprise content/document management.
- Automated Workflow.
- Automation of digital board meetings.
- Automated robotic process (RPA).
- Fixed Asset Administration.
- E-learning.
- Platform for omnichannel communication.
- Managed services and cloud-based storage.

2.4 Advantages of using DataFort's services

The services offered by DataFort are said to convert conventional workplaces into smart workspaces. All company operations should be clear, automated, and paperless. Basically, the services are designed to enable employees to operate more productively and effectively. The company places a strong emphasis on performance being trackable and quantifiable. It has complete control and freedom to re-engineer and modify processes as necessary are guaranteed to clients. Shortly, DataFort Limited is a Bangladeshi firm that provides a vast array of secure document management and digital transformation services. They put a lot of emphasis on innovation, working with global partners, and offering doable solutions to boost productivity and efficiency in enterprises operating in paperless, automated environments.

2.5 Company Projects

DataFort actively participates in several initiatives with an emphasis on security and transparency. Even if certain initiatives are kept private, we are willing to talk about those that can be made public in order to demonstrate our dedication to security and trust.

Dhaka Bank Over 25 of Dhaka Bank's core operations have been automated by successful partnership between DataFort and Dhaka Bank. To ensure the continuous efficacy and efficiency of these automated operations, they are now extending cooperation by offering ongoing after-services support.

IIDFC IIDFC (Infrastructure Development Finance Company Limited) has chosen DataFort for a wide variety of services, including enterprise document management (DMS), assistance for scanning and digitization, and physical and digital records management (archiving). In addition, DataFort is helping IIDFC automate procedures to improve operational effectiveness and streamline daily operations.

Prime Bank DataFort and Prime Bank have joined to incorporate automation procedures into their regular operations. Some ongoing initiatives include those related to international card transactions, foreign exchange trading, ATM reconciliation, and management information systems are notable. By working together, they are able to improve productivity, save time, and make the most use of their resources. In the future, DataFort hopes to have more possibilities to help Prime Bank accomplish their goals successfully and efficiently.

Evercare Hospital Evercare Hospital and Datafort BD have teamed up to put into place a thorough automation framework to enhance service delivery. By automating administrative processes and data processing, the program seeks to increase efficiency, accuracy, and effectiveness. The emphasis is on usability, making it simple for personnel to adapt to automated operations and eventually enhancing patient care and operational effectiveness.

Optimax Our company is currently working with renowned American healthcare company Optimax. Though it's in a very early state of a potential cooperation. Inside an in depth review of their medical professional working hours, this collaboration seeks to emphasize the potentiality of our operations. We are allowed to set up a remote access system to their computers at a specific time to create a log book for their nurses and physicians. Our objective is to boost the overall effectiveness of healthcare delivery by simplifying scheduling, optimizing resource allocation and close observations of their working hours. Our commitment to leveraging technology to enhance patient care and organizational success is demonstrated by this innovative approach.

2.6 How does DataFort work

DataFort collaborates directly with companies to digitize and automate their business operations. They provide safe document management, workflow optimization, and customized technical solutions to increase productivity, efficiency, and data security, eventually assisting businesses in achieving their objectives. DataFort Limited runs its business while emphasizing the important responsibilities with its hard working team, which includes outstanding salespeople, administrative assistants, and developers with advanced degrees plays in the company's success.

2.6.1 Partners and Sponsors

DataFort collaborates strategically with several multinational corporations, like UiPath, ABBYY, Microsoft, Google, Amazon, Terracom, and others. These businesses are most likely the collaborators who work with DataFort to provide technical advantages to its customers. DataFort Limited protects the privacy of its sponsors and stakeholders, who are essential to the development and implementation of the product. There is no disclosure of specific information on these people or organizations.

2.6.2 Program Management

Customer satisfaction will become high because they get the top notch service and products which are assured by DataFort CEO Shawkat Hossain. The dedication to excellence demonstrated by Shawkat Hossain penetrates every facet of business operations. He emphasizes quality control heavily, making sure that all goods and services adhere to the highest standards. This steadfast commitment to excellence permeates all of their customer interactions. Under the direction of Shawkat Hossain, client demands are not only addressed but surpassed. The emphasis on excellence is a defining feature of the customer experience at DataFort, whether it be in the creation of goods, the provision of services, or the answering of enquiries. In conclusion, under Shawkat Hossain's direction, DataFort gives its clients top priority and regularly provides flawless quality, ensuring their pleasure.

2.6.3 RPA Development Management

DataFort is especially well-equipped to provide high-quality and efficient development and operation when it comes to RPA (Robotic Process Automation). Tanvir Alam Nibir, the business's senior data analyst, is essential in this respect, providing the organization with the skills it needs. He is a knowledgeable and experienced contributor. His work is crucial in ensuring that RPA initiatives are managed from the beginning to the end. He makes sure that RPA procedures are both effective and of the highest caliber because of his attention to detail and dedication to perfection. DataFort develops RPA best practices under the careful direction of Shawkat Hossain and with Tanvir Alam Nibir's experience. This dynamic combination of leadership and technological know-how gives clients the assurance that their RPA solutions are created and run to perfection.

2.7 What DataFort Bd do

When it comes to offering their goods and services to other businesses, the marketing and sales team at DataFort BD follows a well-organized process. In order

to introduce and discuss the products, they first schedule meetings. They explain the worth and advantages of their items to potential customers during the first encounters. The following stage entails speaking with senior-level officials, including CEOs, if the potential firm indicates interest and wants to investigate further. To come to mutually agreed arrangements, including price and contractual specifics, the sales staff closely collaborates with the CEO-level decision-makers. This rigorous approach guarantees that every contract is properly thought out, debated, and agreed upon, ensuring that both sides are happy with the terms and the success of the relationship as a whole.

In conclusion, DataFort BD's marketing and sales approach entails reaching out to potential customers, outlining their offerings, and advancing through talks with CEO-level decision makers in order to close profitable business transactions. The company's dedication to creating solid, mutually beneficial connections is shown in this systematic strategy.

2.8 Automation Development Process

The process of developing an automation system starts off by identifying jobs that are ready to be automated, which is followed by thorough requirement collection. Architecture and procedures are carefully defined during the design phase, and this planning leads to the creation of code or automation scripts throughout development. Before deployment, meticulous testing makes certain that the automation performs as expected. After deployment, careful observation and continuing maintenance guarantee constant performance. Users can engage with the automation solution efficiently thanks to documentation and training. While security and compliance are always of the utmost importance, continuous development, driven by feedback, aids in adapting to changing demands. Reporting and analytics gather useful data to improve decision-making. Cornerstones for ensuring that automation solutions contribute to enhanced efficiency and organizational growth are collaboration and communication.

2.8.1 Requirement Identification

A critical step in the creation of automation is need identification, particularly when the environment in which the developer must operate is based on a user interface (UI) or when the developer must rely on human interactions. Gaining a thorough grasp of the needs is essential, as is determining whether automation is feasible. To analyze processes and tasks for automation, automation developers work closely with stakeholders. By taking into account variables like work difficulty, data accessibility, and the possibility of human mistake, they assess the technological viability. Their analysis, nevertheless, goes beyond just technical matters. They make sure that the resultant solution is still user-friendly and straightforward by examining if automating a process is in line with user wants and expectations. Cost-effectiveness is a crucial factor as well. The investment is necessary, which includes development

and maintenance expenses, is compared against the potential rewards of automation. By conducting a comprehensive analysis, it is ensured that automation projects are not only technically feasible but also financially and operationally viable for both the customer and the vendor. Automation developers may create user-centric, cost-effective solutions that increase productivity by solving these complex needs, which will be advantageous to all parties.

2.8.2 Context Capture

Context capture in RPA is the procedure of acquiring crucial data and specifics required for RPA bots to precisely automate operations. Understanding the task entails identifying data sources, user interactions, decision points, and exception handling. This data is recorded and tested to confirm it, ensuring that RPA systems accurately mimic human activities inside current processes and respond to changes.

2.8.3 SOW(Scope Of Work)

The "As-Is" process analysis and the "To-Be" process design are the two main stages of the Scope of Work (SOW) in RPA development. Existing procedures are recorded in the "As-Is" phase, and any modifications or additions are indicated as "Out of Scope" items once authority has been granted. The "To-Be" phase of the project is when automated, optimized procedures are developed after that. The SOW serves as a roadmap for the project, keeping it on track and managing expectations. To effectively develop the final RPA solution, collaboration with stakeholders is essential throughout.

2.8.4 Development Phase

The automation development phase is a crucial stage in RPA when automation developers generate code or scripts, put them through rigorous testing, and then debug them. They control time complexity to guarantee effective work completion, maximize resource usage, and put in place strong security measures. Comprehensive documentation is produced for future use, and error handling procedures are implemented. This phase also includes crucial elements like performance optimization, scalability planning, and user training. After being extensively tested and certified, the automation solution is put into use in the organization's production environment, where it helps to improve productivity and simplify procedures while upholding strict quality and security requirements.

2.8.5 QC Phase

The Quality Control (QC) team thoroughly checks the product for any problems or discrepancies during the release process in automation development, which is a vital stage. The User Acceptance Testing (UAT) team then verifies the solution to make sure it satisfies user expectations and criteria. The deployment of the automation solution into the live production environment happens when both teams have given their approval and any faults found have been fixed. This systematic approach enables a smooth transition, reduces interruptions, and ensures that the new automation easily integrates with old procedures, eventually increasing operational efficiency and effectiveness. If any flaws or extra features are found throughout the release phase in automated development, developers take immediate action to fix them. This agile methodology enables flexibility in the incorporation of enhancements and guarantees that the automation solution is in its finest shape prior to deployment. The solution moves forward with deployment in the real production environment after these improvements or bug fixes have been put into place and properly tested, helping to create a more robust and effective operational procedure.

2.9 Our Clients in Bangladesh

DataFort provides services and software solutions to 17 different industries in the country. Some of our clients in Bangladesh are -

- HSBC Bangladesh
- HBank Alfalah
- NRB Bank Limited
- LankaBangla Finance Limited
- Bank Asia Limited
- IDLC Finance Limited
- DBH Finance Corporation
- Woori Bank Limited
- National Finance Limited
- Banglalink Digital Communications
- Robi Axiata Limited
- CISCO Bangladesh

- Evercare Hospital Dhaka
- Roche Bangladesh Limited
- Nestle Bangladesh Limited
- Philip Morris Bangladesh Ltd.
- ACI Godrej Agrovvet Pvt. Ltd.
- Lafarge-Holcim Cement Ltd.
- Marico Bangladesh
- Crown Cement.
- LPidilite Speciality Chemicals (BD) Pvt. Ltd.
- BASF Bangladesh
- Air France Martin air
- KLM Cargo
- Swiss World Cargo
- Virgin Atlantic
- Lufthansa Cargo
- Cathay Pacific-Dragon Air
- Oman Air
- Etihad Airways
- Hop Lun Apparels
- Charles Voegele Fashion
- Unilever Consumer Care Limited
- Arla Foods Bangladesh Ltd.
- KPMG
- APL

2.10 Our Global Clients



Figure 2.1: Global Clients



Figure 2.2: Global Clients

2.11 Recruitment Process

Job vacancies at DataFort are often posted on their official website or on different job sites. A job seeker may get started by looking for job opportunities that fit his passion and expertise set. He will need to fill out an application via the online by using their website or a job portal. Applicants might need to upload a curriculum vitae and a cover letter for this. Applications will be assessed by the HR department to see if applicants comply with the necessary criteria for the position. If the

application is chosen for further consideration, he or she could get a call or email to arrange a phone interview or to break the ground. Experience, talents, and interest in the organization will be the main topics of this interview, which may be executed by an HR professional. Concerning the interview, applicants might have to go through technical and behavioral assessments. Whereas, technical assessment will evaluate candidates area of expertise and behavioral assessment will analyze interpersonal abilities, collaboration ability, and capacity to solve problems. If the applicant successfully meets all the interview process, he may receive the job offer I was told by the company to get some knowledge regarding UiPath before attending the interview. The HR department wanted to analyze my skill in relation to the automation process and gave me five tasks to complete within one week. As I could show my capability over four tasks out of five, the company was convinced enough by my potential adeptness and eventually recruited me for my internship period.

2.12 Technology and Framework

Datafort specializes in UiPath-based automation, therefore, to address certain automation needs, they probably use a variety of technologies, frameworks, and connectors. Here is a description of the uipath technology and framework.

- UiPath Studio
- UiPath Orchestrator
- WorkFlow Foundation
- Attended and Unattended bot
- .Net Framework
- UiPath Libraries
- UiPath AI Center
- Security and Authentication
- Microsoft Azure
- Visual Basic

Chapter 3

Training Phase

3.1 Overview

A crucial turning point in my professional career has been working for a global organization like Datafort BD. This opportunity provides priceless real-world experience that will help me easily move into the professional work environment in today's fiercely competitive employment market. I discovered that as a soon-to-be graduate, the theoretical information I acquired throughout my academic years is now being used productively in a real-world situation. This internship not only satisfies a graduation requirement for BRAC University, but it also offers me a fantastic opportunity to get real-world experience and abilities. A seamless and rewarding transition into the world of professional employment has been made possible in large part by my supervisor's guidance through the many phases of training and job. I am satisfied with the chances and knowledge this experience has provided me with as it is assisting me in bridging the gap between academic study and real-world application.

3.2 UiPath Certification

3.2.1 RPA Business Analyst Foundation

The RPA Business Analyst Foundation certification is a crucial step in becoming an expert UiPath automation developer. With the help of the courses and certification, I got the abilities and information I need to comprehend not just the subtleties of UiPath automation but also its larger commercial outcome. I will be well-equipped to interact with clients in an efficient manner because of this foundation. Likewise, I'll be able to grasp their special business requirements, convert them into automated solutions, and persuade clients of the value proposition. This covers not only the technical issues but also the financial factors, allowing me to establish project charges and defend expenses with confidence. Moreover, the RPA Business Analyst

Foundation certification, eventually, assures me that I am not just a capable coder but also a professional communicator and consultant, able to create end-to-end automation solutions that are in line with the client's business objectives.

The following certificate presents my qualification over UiPath business analyst.



Figure 3.1: RPA Business Analysis certificate

3.2.2 RPA Developer Foundation

A 38-hour training course for prospective Robotic Process Automation (RPA) developers is called the RPA Developer Foundation course. It covers essentials including workflow design, process automation, and RPA platforms. Participants build up skills in developing automation scripts, managing data, handling errors, and creating, testing, and deploying automation solutions. The skills acquired in this foundational course prepare students for careers in RPA development and automation technologies.

3.2.3 RPA Advance Developer:

The RPA Advanced Developer course is a rigorous, 40-hour curriculum with a distinct certification procedure. Participants must successfully complete two large projects and upload them for review in order to get the certificate. Importantly,

the course may only be passed once per three attempts, and if the conditions are not met during these efforts, the certificate will not be awarded.

Because it provides participants with advanced RPA abilities, which make them important assets for businesses looking to adopt sophisticated automation solutions, this course is essential in the industrial environment. The "REFramework," which is important for developing reliable, maintainable, and scalable automated processes, is a key emphasis of the course. Effective industrial RPA work requires proficiency in the REFramework. Overall, taking the RPA Advanced Developer course is a big step for anybody hoping to further their RPA career and meet the rising need for automation across a range of sectors.

The following certificate presents my qualification over UiPath RPA Developer advanced.



Figure 3.2: RPA Developer Advanced certificate

3.2.4 Others Knowledge

Moreover, expanding my knowledge to Selenium and Power Automate is crucial for my automation journey. Selenium's web automation and cross-browser testing capabilities will streamline tasks, while Power Automate's integration with Microsoft services and user-friendly environment make it a powerful tool for automating business processes. These skills will enhance productivity and efficiency in various professional settings.

3.2.5 Assistance

My professional path has benefited greatly from having Tanvir Alam Nibir as a mentor. He continuously provides unshakable support and direction, giving assurance and an air of competence. His direction has improved my comprehension and confidence in taking on new difficulties. His eagerness to impart knowledge and assist me in overcoming challenges has been crucial to my professional development, making him an important resource in my quest for greatness in my area.

3.2.6 Communications

Datafort BD is a well-organized business that follows a daily routine, starting at 8:30 AM and focusing on punctuality and commitment. They maintain a professional work-life balance by closing at 5:30 p.m. They use Microsoft Teams for virtual meetings and Outlook for formal document sharing, rarely do we use our telegram id if anyone is unable to reach us, which demonstrates the importance of good communication and cooperation. Staff members are required to sit with Shawkot Sir during daily reporting.

Working Environment: Datafort BD's workplace is characterized by camaraderie and friendliness, making each team member feel valued and respected. The uplifting environment is a welcoming one, where everyone is eager to help each other. The collaborative approach encourages free discussion and encourages every voice to be heard, fostering creativity and a supportive environment. This makes Datafort BD an exceptional place to advance professionally, as it never feels down or unsupported. Shortly, this professional environment gave me efficient progress regarding my workfield.

Chapter 4

My Stepping into Automation

4.1 How it started

I got the chance to explore UiPath Studio, the main platform for creating and implementing automation solutions, during my UiPath RPA training. I came across a large variety of tasks and tools in UiPath Studio that served as the foundation for my automation projects. These jobs varied from straightforward ones like automating Excel and email to more intricate ones including data manipulation, web scraping, and connections with several apps.

I learned how to build workflows, write automation scripts, and set the order of the activities the robot should take in UiPath Studio. I discovered how to use variables, loops, and conditionals to improve the intelligence and flexibility of my automated systems.

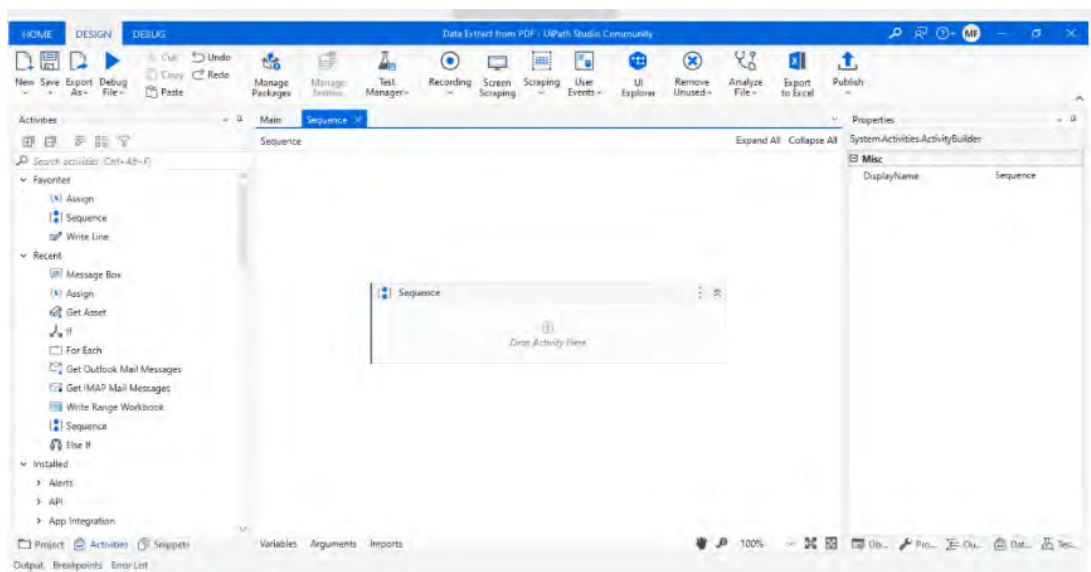


Figure 4.1: UiPath Studio Panel

I also investigated the difference between attended and unsupervised bots. Alongside

people, attended bots help them complete their jobs and offer ongoing assistance. Unattended bots, on the other hand, work autonomously and carry out automation duties on distant servers or virtual machines without human supervision.

In my quest to learn RPA, the knowledge I gained about the UiPath Studio environment was crucial. I was able to create, test, and implement automated solutions that improved productivity, simplified operations, and decreased mistakes across a variety of fields and applications.

4.2 FX Dealing of Prime Bank

My other work required me to carefully extract data from a variety of PDF documents given by Prime Bank, with a particular emphasis on their FX Dealing operations. The preserve and non-preserve versions of these PDFs were separate file types. Using the potent method of regular expressions (regex), I was able to accurately locate and extract crucial information from these papers and overcome this issue. I was entrusted with classifying different banks and identifying certain transaction types for each of them within the context of Prime Bank's FX Dealing. These contract kinds included Swap deals, Spot deals, Depo deals, Lend deals, and Borrow deals, each of which had its own set of specifications and information. The use of OCR (Optical Character Recognition) technology made things much more difficult. Making it feasible to deal with both printed and handwritten information required processing scanned documents and extracting text data from them. Following the successful extraction of the pertinent data, the information had to be carefully separated from one another and organized to make sure it was correctly matched to the proper bank and transaction type. This accuracy was necessary since the information had to be easily incorporated into the Prime Bank CBS (Core Banking System) form, which acts as the central repository for all financial transactions and records. Using regex and OCR technology, I was responsible for bridging the gap between PDF documents in different formats, different banks, and different deal kinds. Due to the effective data extraction, classification, and entry into the Prime Bank CBS form made possible by this, the FX Dealing division's record-keeping process was simplified and accurate.

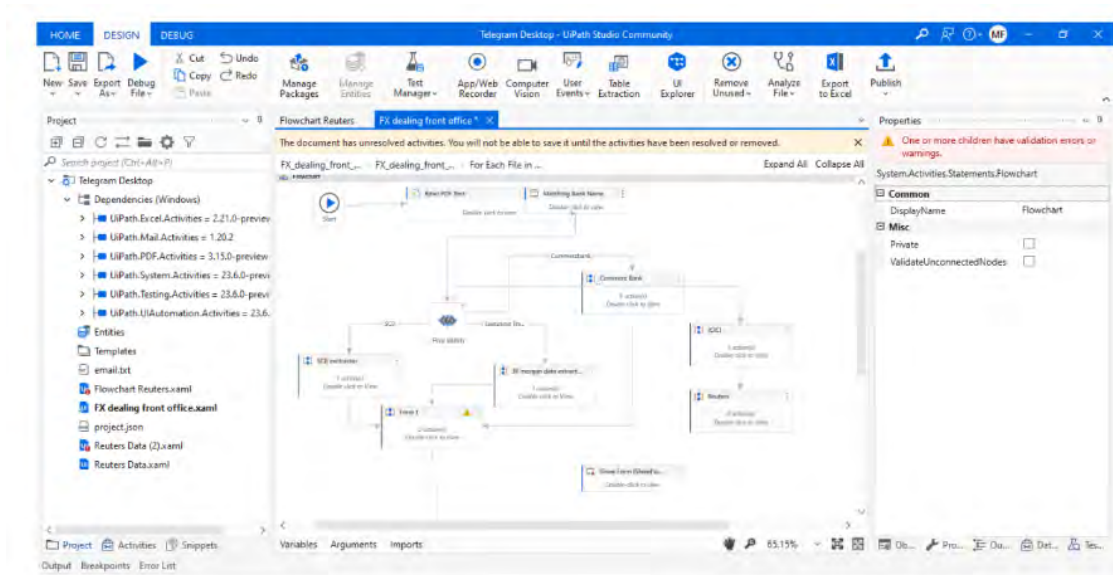


Figure 4.2: Working Flowchart of FX Dealing Process

4.3 IIDFC

IIDFC (Infrastructure Development Finance Company) tasked me with the difficult task of incorporating branch names into their Document Management System (DMS) as part of my employment there. This was no minor effort considering that the DMS included over 500 folders, each of which normally held between 6 and 7 files. The goal was to carefully go through this huge repository and find and change the branch name in each file. This assignment was extremely difficult since there were so many files over 4000 in total. A human operator would possibly be able to go through about 300 files by hand, but the automated method I created was incredibly effective. Within about four and a half hours, it successfully completed the entire upgrade operation. This automation ensured a high level of precision and uniformity throughout the process, as well as considerable time savings. It served as an example of how automation can boost productivity and perform difficult, repetitive jobs quickly and accurately, eventually resulting in more effective data management at IIDFC.

4.4 RTGS

My other process is RTGS which stands for Real Time Gross Settlement. High-value financial transactions can be settled instantly and individually with the help of the banking system known as Real- Time Gross Settlement (RTGS). Real-time operation lowers credit exposure and settlement risk. One of the most desired processes from the Prime Bank’s authority is this. Real-Time Gross Settlement (RTGS) is widely used in large-scale interbank transfers and securities transactions. It is monitored by Bangladesh Bank laws to ensure stability and security. The system is accessible

during standard business hours, and before using it, users must check in and get authorization. Basically, it was both UI and excel based automation process. My initiative task was in this process is take the log in credentials from the user using prompt message for the CBS log in. Then go to the specific module called “Soft Account Statement”. By clicking there, robot has to take the account statement and the date from the user. The date has to be in a very specific format. The Client’s demand was whatever date format they put; my robot has to convert it into that format. That’s why I have to use their “Global Cultural Invariant” date type of format. It is a LINQ code which is often used by the RPA programmer. Then, the robot has to download a CSV file. Furthermore, robot has to read that file using “Read CSV” activity and do the necessary steps for example: Remove all the commas from there, remove empty rows (If Any), remove unnecessary data etc. Then convert that CSV file into XAML format for uploading in the Bangladesh Bank portal. To log into the portal of the central bank, the credential was hard coded. The design of this part was very crucial and sensitive because any wrong data upload here or upload in the wrong module can led to catastrophic disaster here. This process was stuck in the UAT phase for a long time. When their treasury department becomes confident enough to realize that the formatted data is 100% accurate then they move forward to live this process.

4.5 ATM Reconciliation

Another process which I am currently working is in the execution of Prime Bank’s ATM Reconciliation project, a very crucial part of their ATM Operations which contains several complex steps. Initially, my design requires to prompt users for their email ID and password on the run to save some specific attachments. I have to design for both the read and unread mail. Most importantly, their demand was, I have to save the attachments of the last day but to consider that the bank remains closed on Friday and Saturday but to store the data of Thursday. So, I have to design considering that. These attachments, mostly come as excel format from various ATM booths, contain crucial information such as Load Cash, Offload Cash, Print Counter, Physical Counter etc. I have to take all the data branches and date wise and cross verify the data with their core banking system (CBS) supported by T24. My design has been assigned in such way that it will log in to the CBS and go to the account of that particular branch with their special branch code. Then extract the data from that. Now, if there is any mismatch between those reports and CBS or between Physical counter and print Counter, my design should give them those acknowledgements. Additionally, I extract pertinent information from very specific mail body documents, known as Switch balance, Using UiPath HTML activities. Furthermore, according to the switch report, if any of the branch’s data are missing in the mail robot must give them a pop up message. Moreover, formatted data from their vendors (G4S, SECUREX) undergo the same process for their smooth ATM reconciliation process. The gathered data is then painstakingly updated and arranged on the master Excel sheet, an extensive process that involves all 170 of the bank and its branches.

4.6 Others

My team leader and I worked together extensively on various successful proof of concept (POC) projects. For example: Omega Prime, paragon etc. Where I was able to show my both technical and documentational expertise. Moreover, I have created the statement of work (SOW) and comprehensive User Manuals for the process I have done in Prime Bank automation processes. These proved my commitment to precision and industry best practices. Throughout this process, I maintained a strong collaborative mindset and worked closely with cross-functional teams to provide end users with helpful tools and raise the overall quality of the documentation.

4.7 Appreciation from PBL

Prime Bank Limited is pleased with our entire project and had planned and organized an appreciation ceremony to formally launch it. The committee members and key leaders had been in present in that party.

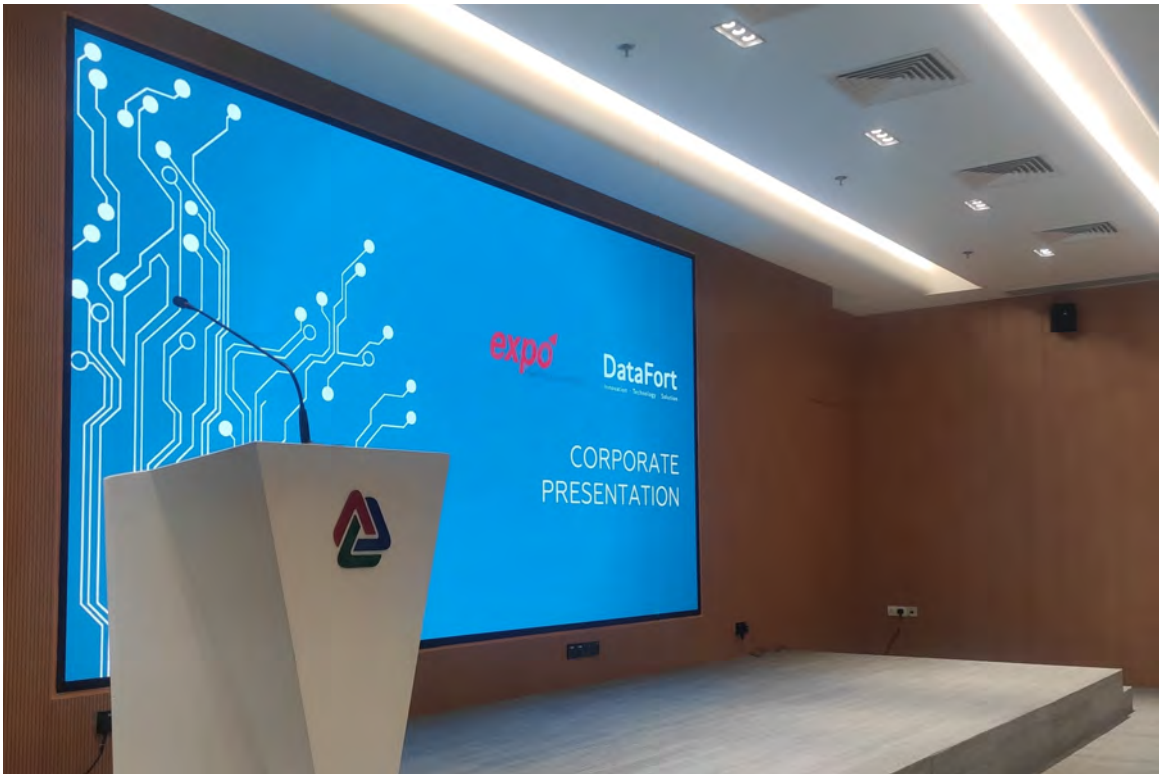


Figure 4.3: Appreciation Party from PBL

4.8 Challenges

Throughout the whole developing process my journey was filled with so many diverse challenges, everything from the complicated nature of the clients to the lack of sample data providing. Working with shifting client demands has required changing agile process and maintaining broad channels of communication has essential to handle changing client needs. Data scarcity has been addressed through meticulous collaboration with clients. Transparent obligations and cross-functional meeting were so essential due to the dynamics of collaborating with diverse teams in supposed to guarantee a smooth integration. Sometimes we had to arrange meetings to make collaborations with client's individual team. Another challenge is to make client understood the goal and scope of automation. Automation is a logic-based operation, it's not always that thing which mimic the human idea. Moreover, getting clients mail's reply in time was so difficult which has slowed down the build process a bit.

Chapter 5

Advancement

5.1 Career Advancement

Client Handling

After Joining into DataFort BD, I have improved effective client management skills. Broad channels of communications, frequent meetings, detailed documentation makes sure that clients are engaged and well known about the development phase. Managing clients with professionalism and courtesy, employing good manners and etiquette throughout the working phase.

Corporate Culture

Before joining DataFort I had zero experience about the corporate culture and a fully functional corporate office operates. So it was a wonderful opportunity and a great journey for me to work with the versatility of working experience, environment and cultural background.

Communication Skills Throughout the whole journey I had to give lots of presentations to my seniors, clients, stakeholders and team members which helped me a lot to improve my presentation and communication skills. Moreover, helped me to overcome the idiocy.

Software Skills

I had to work with different software which has different stack operations. For example: Uipath,Power Automate, Selenium, Appium etc. As a result,I think working with versatile tools helps me a lot to gain the knowledge of different stacks and improve my confidence.

5.2 Technical skills

Microsoft Workspace:

Learned how to work with the outlook, Visio, Excel, Word, PowerPoint and many more.

Languages As I have mentioned before since I have closely worked with so many different tools and languages, with my talented development team members, it helps me a lot to gain the knowledge about different programming languages, what are the dependencies, libraries and challenges.

5.3 Personal Advancement

Confidence

The internship increased technical skills and confidence as a collaborative work environment, mentorship, and challenges, preparing me for the complexities of the professional view.

Negotiations

Working with the end user very closely helps me to understand when it is time to say “NO”. What I have seen is that the client’s demand has increased over time which often goes beyond this scope and creates unnecessary demand. So, they have to tell me it is out of scope and for this you approach me officially through mail.

Chapter 6

Effectiveness of RPA

Through the automation of rule-based and repetitive operations, RPA is a very effective tool for enhancing the business and corporate procedures. Since it is rule based operation, it reduces mistakes which can be done by manual labor and boosts and boosts accuracy and productivity while saving a huge amount of money and time. RPA helps it simpler for business to expand their operations, gives the guaranty for availability at all times and enhancing regularity compliance. By reducing human effort, it focuses on more strategic tasks, improve customer's technological experiences. Moreover, it reduces trial base error which is a very crucial part of enhancing business. Adoption of RPA is very smooth because of its user-friendly interface. The last thing is RPA is becoming so famous because of its;

- Effectiveness and Precision
- Money and Time Savings
- Scalability
- Enhanced Obedience
- Integration with Existing system
- Data Accuracy
- Enhanced Customer Experience

Chapter 7

Internship Journey Flowchart

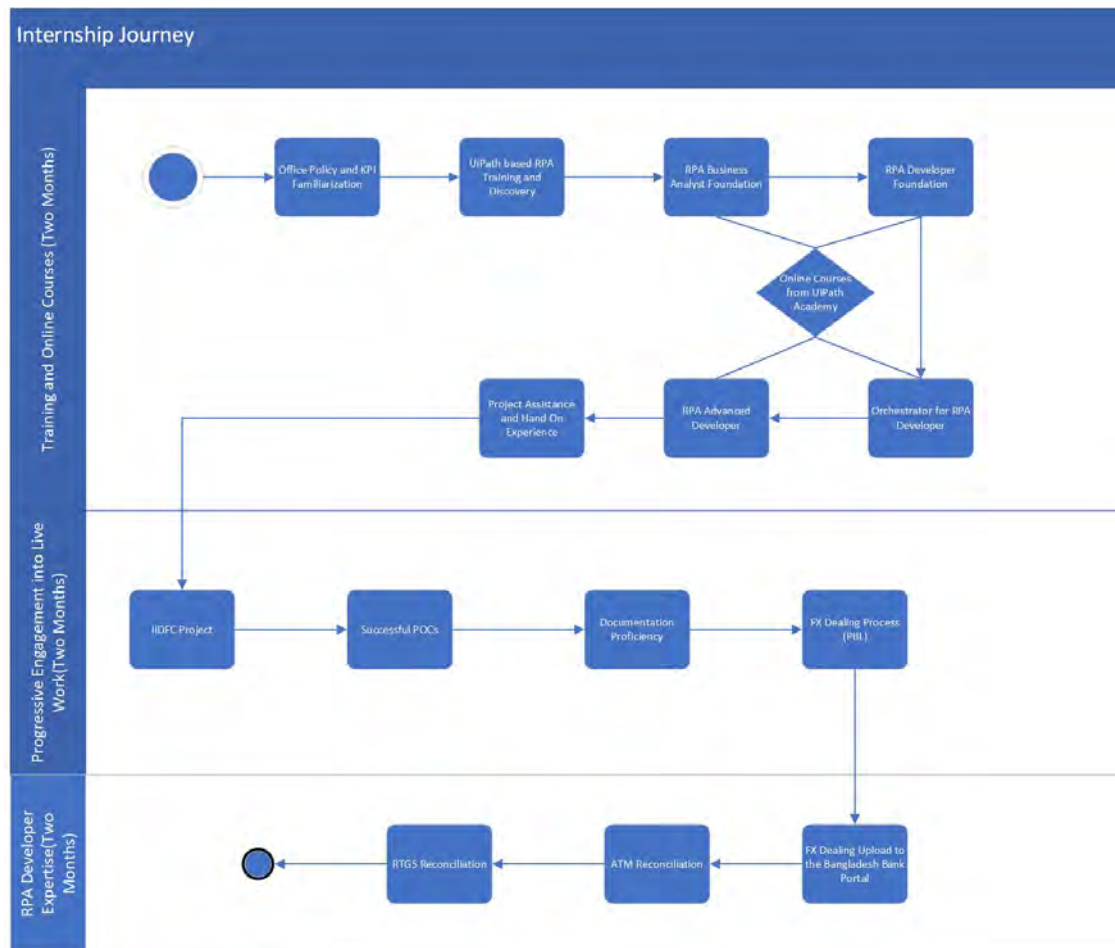


Figure 7.1: Internship Journey Flowchart

Chapter 8

Conclusion

An internship can be considered as a vitally important period for an automation learner since they offer an efficient, enhanced capability, and develop the skill that reinforces theoretical background understanding. It creates an atmosphere for the learner with many difficulties and possibilities to boost their ability to work in this constantly developing workplace. The first two months of my internship interval provided me with the knowledge of advances in automation in the real-life setting. This practical knowledge is crucial for learning how automation techniques function in the real world. It also gave me the chance to balance the theoretical knowledge to practical automation initiatives, connecting the theoretical and practical divide. Alongside, I learned technical abilities, such as programming, analyzing data, statistical analysis and figuring out solutions, during the internship. Automation engineers and technicians must be able to develop, execute, and debug automated systems, hence these abilities are critically important. Furthermore, the opportunity to work with professionals and experienced workers offered me the chance to develop connections with skilled automation specialists and business professionals that can lead to additional career possibilities and opportunities. My work field related to automation programs often created complicated issues that demanded problem solving skills. Hence internships provide an opportunity to work on real-world automation challenges while developing analytical as well as problem-solving abilities. I started this internship on June 1st, 2023. It is a six-month agreement that is expired on November 30, 2023. I explore the experiences and leanings I had throughout the course of my four-month internship in this internship report. The salient features and takeaways from this momentous stage of my career are distilled into this paper.

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