



Daffodil
International
University

Course Name: Final Year Thesis/Project/Internship

Internship at DataSoft Systems Bangladesh Limited

Supervised By

Md. Shohel Arman

Assistant Professor, Department of Software Engineering

Daffodil International University

Prepared By

Md. Mohi Uddin Mahim

ID: 191-35-2790

A report submitted in partial fulfillment of the requirement for the degree of
Bachelor of Science in Software Engineering

Department of Software Engineering

Daffodil International University

Approval

This thesis titled on “**Internship at DataSoft Systems Bangladesh Limited**”, submitted by **Md. Mohi Uddin Mahim (ID: 191-35-2790)** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University

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Md. Shohel Arman

Assistant Professor

Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University

Internal Examiner 2



Rimaz Khan

Managing Director

Tecognize Solution Limited

External Examiner

DECLARATION

I hereby declare that the internship report named "Internship at DataSoft Systems Bangladesh Limited" was created based on the activities of my 4-month internship. It was my original work, completed under the guidance of "Md. Shohel Arman" Assistant Professor in the Department of Software Engineering.

The report is distinctive and hasn't been filed to anyone or anywhere for any academic reason. I also gathered and organized the statistics and information that are given here. Any falsification or alteration of data or material in this paper is exclusively my responsibility.

In order to partially meet the requirements for the Degree of Bachelor of Science, this report is prepared to submit to the Faculty of Science & Information Technology Department of Software Engineering at Daffodil International University.

Supervised By:



Md. Shohel Arman
Assistant Professor
Department of Software Engineering
Daffodil International University

Submitted By:



Md. Mohi Uddin Mahim
ID: 191-35-2790
Batch: 28
Department of Software Engineering
Daffodil International University

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First and foremost, I want to express my thankfulness to God for having been gracious to me over the years and for providing me the willpower to finish my B.Sc. in Software Engineering.

My supervisor, Md. Shohel Arman, Senior Lecturer in the Department of Software Engineering at Daffodil International University in Dhaka, has my unending gratitude. His astute observations and unwavering encouragement considerably influenced my decision to pursue a career in the industry's practical side. I am in my current position thanks to his unending patience, studious guidance, constant inspiration, active support, constructive criticism, and insightful recommendation.

For his generosity and appropriate support of my internship, I would like to express my sincere gratitude to Dr. Imran Mahmud, associate professor and department head of Software Engineering at Daffodil International University. I also want to express my appreciation for the assistance that all of the staff and employees have given me over the years.

Additionally, I want to express my sincere gratitude to my classmates for their support over the past four years.

Finally, I'd like to thank and express my gratitude to my parents and sibling for their help and endurance

Table Of Content

Table Of Content.....	iv
Appointment Letter	1
Chapter 1.....	2
1. Introduction.....	2
1.1 Introduction.....	2
1.2 Background	2
1.3 Motivation.....	3
1.4 Objective	3
1.5 Scope of the study	3
1.6 Limitations	4
Chapter 2.....	5
2. Company Overview	5
2.1 About.....	5
2.2 Company Profile	5
2.3 Mission.....	6
2.4 Vision.....	6
2.5 Value.....	6
2.6 Department Hierarchy.....	7
2.7 Services of DataSoft Systems Bangladesh.....	7
2.8 Products.....	8
2.9 Contact Detail	9
Chapter 3.....	10
3. Company Culture and Carrying Out	10
3.1 Working Environments.....	10
3.2 Rules and Regulation	10
3.2.1 Flexibility.....	10
3.2.2 Semi-Formal Attitude	10
3.2.3 Office Schedule.....	10
3.2.4 Responsibilities	10
3.3 Recruiting Policy	11
3.4 Getting Started	11
3.5 Evaluation Process	11

Chapter 4.....	12
4. Software Development Life Cycle and Overview	12
4.1 Software Development Life Cycle.....	12
4.2 Overview of My Tasks.....	13
Chapter 5.....	15
5. Roles and Responsibility.....	15
5.1 Training and Knowledge Sharing	15
5.2 Projects.....	15
5.2.1 Project 1(Ai In Arts)	15
5.2.1.1 Ai In Arts UI.....	16
5.2.2 Project 2 (AirSense)	19
5.2.2.1 Use Case Diagram.....	20
5.2.2.2 ER Diagram	21
5.2.2.3 AirSense UI.....	21
5.2.3 Project 3 (SDS Enterprise).....	29
5.2.3.1 SDS Enterprise UI.....	30
5.3 Other Task.....	39
5.3.1 Documentation.....	39
5.3.2 ESG	39
5.3.3 Field Engineering.....	39
Chapter 6.....	40
6. Experience & Achievements.....	40
6.1 Overcome Problems and Difficulties	40
6.2 Ability To Learn	40
6.3 Technology Enhancement.....	40
6.4 Non-Technical Growth	40
6.5 Achievement	41
Chapter 7.....	42
7.1 Concluding Statement.....	42
7.2 Recommendations.....	42

Appointment Letter



DSSBL/INT/2022
July 26, 2022

Md. Mohi Uddin Mahim
62 West Agargaon
Dhaka, Bangladesh
Mobile: +880-1793323884
Email: mohi.u.mahim@gmail.com

Subject: Placement of Internship.

Dear Mr. Md. Mohi Uddin Mahim

Greetings from DataSoft!!!

In reply to your application request, we are pleased to offer you an Internship opportunity at DataSoft Systems Bangladesh Limited. Please find the following confirmation of the specifics regarding this program.

Start Date: **July 24, 2022.**
End Date: **November 24, 2022.**

Reporting Relationship: Sagar Chakraborty, Senior Software Engineer, DataSoft Systems Bangladesh Limited.

Responsibilities: Day-to-day responsibilities, projects or assignments.

Number of working Hours: Nine (9) hours (9:00 AM to 6:00 PM) per day.

You will be responsible to perform the assigned project-related work given by your supervisor. As an **Intern**, you can enjoy free snacks and lunch facilities from the office premises.

Regards

Md. Maniruzzaman Shakil
Assistant Manager, Human Resources Department
DataSoft Systems Bangladesh Limited

DataSoft Systems Bangladesh Limited

Rupayan Shelford (Level 19, 20), 23/6, Mirpur Road, Shyamoli, Dhaka-1207,
Bangladesh. Phone: +880-2-58151538, +880-2-58151542, +880-2-48121377.
Email: info@datasoft-bd.com web: www.datasoft-bd.com

Chapter 1

1. Introduction

1.1 Introduction

The internship is a well-known way for students to enhance their experience while learning from a variety of perspectives. Students receive a variety of skills during this internship from numerous organizations, which will greatly aid in the development of their theoretical and practical knowledge. Our lives are increasingly based on computers as we become older and have access to more sophisticated amenities. A great career option and emerging trend is software engineering. In today's market situation I want build my carrier from the get go. For developing my skills and knowledge joining at DataSoft Systems Bangladesh as intern was a good decision. I am really thankful to my teacher who had taught me well throughout the varsity years. I am also thankful toward the team who supported me well. Throughout the varsity years I have completed various projects with multiple languages and tools such as Java, React, Node, Express, MySQL, MongoDB. Now, I am confident that I am ready to meet any challenges and having an excellent carrier.

1.2 Background

Internship programs offer a unique setting for building a strong base for a brand-new career, understanding corporate culture, gaining practical experience, developing relevant skills, and offering the chance to obtain long-term employment in the host company and other businesses.

"BSc. in Software Engineering" undergraduate programs are offered from Daffodil International University. As an undergraduate student, the program mandates that we do an internship with a respected organization. During this time, I will receive hands-on training in workplace procedures and industry knowledge. I spent four months as a software developer intern at DataSoft Systems Bangladesh as part of my internship program. As a full stack developer, I had to work. A software or web development layer called a "Full Stack" consists of both the front-end and back-end components of an application. Users interact with your program through the front-end. Users cannot see the application logic, database, server, or other back-end components.

I've had the chance to improve my abilities and broaden my knowledge of full stack programming thanks to the internship. I encountered several obstacles on this journey, which was not simple for me. For several projects, I had to master new technology, which helped me get to know myself better.

1.3 Motivation

As student of Software Engineering Department, I wanted to gain knowledge on how to design, develop and maintain a software with ought most quality. From the university we get the basic knowledge of software development. But we do not get to know how they work in actual industry. Thus, the motivation of joining an intern. I wanted to work in the software industry but right now the market is so competitive. By joining intern, I wanted to gain knowledge of how IT firm works, how they design, develop and maintain a software in real life. Before joining as intern I'm a newbie who want to study more and produce some artistic works. This internship has given me an opportunity to learn and create my carrier on this market.

1.4 Objective

This report's major goal is to complete the Bachelors program's requirements and to present the knowledge and information that were acquired throughout the organization's internship period.

The other important purposes are as follows:

- Introduce the organization DataSoft, including the standards that I followed there.
- Writing codes and maintaining codes.
- Working on minor bug fixes.
- Work in response to the developer team's request.
- Working on documentation.
- Learning new technologies.
- Strong knowledge about website design.
- Increase my ability to real life problem solving.
- Cooperate well with others and hone your administrative abilities.
- To maintain ethical standards and ideals while improving technical skill..

1.5 Scope of the study

The primary goal of this internship report is to Meet the Criteria of the undergraduate BSc program while also presenting the knowledge and information gained during the internship period with the company. During this internship period here, I learn about the responsibility as an employee how to be professional with the work within the time limit and provide the output in time. I've covered the business, its services, products, working environment, culture, and policies in this essay. The second section of the report discusses how I began my internship and the kind of work I did during this time. Software Development and How to Use Different Tools and Practices in the Software Development Life Cycle are covered in the third section of the paper.

1.6 Limitations

First off, due to the nature of the contract I had to sign when I joined DataSoft Systems Bangladesh, and the nature of the contract between DataSoft Systems Bangladesh and its clients, I am unable to disclose certain details about the company, its products, and services that are sensitive business information. Furthermore, a number of limitations, including time and resources, have reduced my production.

Chapter 2

2. Company Overview

2.1 About

DataSoft is the top provider of software products and services in Bangladesh and has earned the CMMI level 5 and ISO 9001:2015 certifications. Since 1998, DataSoft has a proven track record of supplying customers in the government and corporate sectors with technological services that are creative and cost-effective.

The history of DataSoft is just as compelling as the history of Bangladesh, where it was founded. DataSoft's vision of providing high-quality solutions to build The Digital Delta, which is driven by innovation and governed by integrity. The company was founded with the mission to maintain its position as the leading provider of software solutions, ensuring the benefit of clients, shareholders, and employees. DataSoft has amazed its clients and stakeholders with outstanding results, mirroring the astonishing expansion of the Bangladeshi economy, by developing world-class capacity to provide global solutions. DataSoft has expanded its operations to three different continents, making it a truly global solution supplier.

DataSoft has a proven track record of providing customers with cutting-edge and reasonably priced technical services for projects in both the corporate and public sectors since 1998. Many Fortune 500 firms are among our customers, and they provide mission-critical IT services for the public sector, such as e-Payment, Customs House Automation, Port IT operation (CTMS), and commercial bank automation, which affect the lives of millions of people. By planning and executing crucial projects like Chittagong Port Automation, as a company, we have made a substantial contribution to Bangladesh's digitalization. The Jute Genome Project, the most challenging scientific endeavor in Bangladeshi history, had DataSoft as its IT partner. By providing a complete solution for Bangladesh's well-known Micro Credit Solution, DataSoft also had an impact on the rural population's way of life.

DataSoft is a leader in using cutting-edge technologies today to help us envision the future. DataSoft is a CMMI Level 5 company with a strong portfolio in IoT, AR, VR, and is actively working on projects including Machine Learning and Artificial Intelligence.

2.2 Company Profile

DataSoft is the top provider of software products and services in Bangladesh and has earned the CMMI level 5 and ISO 9001:2015 certifications. Since 1998, DataSoft has a proven track record of providing customers in the corporate and governmental sectors with technological services that are creative and cost-effective.

2.3 Mission

Powered by innovation, guided by integrity, deliver quality solutions to build The Digital Delta.

2.4 Vision

- To maintain the leading software solution provider ensuring benefit of customers, shareholders and employees
- Developing, disseminating and exploiting the remarkable experience, expertise and knowledge of all of our people
- Developing a distinctive competence in process development and project management

2.5 Value

- **Customer satisfaction is paramount to business success**

At DataSoft, we work hard to go above and above for our clients.

- **DataSoft is result oriented**

At DataSoft, we strive for continuous improvement by setting ambitious, achievable goals.

- **We are committed to innovate**

DataSoft is dedicated to innovation since it can change how our clients conduct business.

- **Great teams build great companies**

At DataSoft, we strive to draw in, nurture, and keep top talent.

- **Aspire to Lead**

By establishing examples we lead so that others can follow.

- **Honest and Fair**

In all of our interactions with clients, partners, shareholders, and one another.

2.6 Department Hierarchy

According on the assignment, DadaSoft offers a variety of departments. The divisions are

- **Service & Customer Department:** A customer service professional communicates with customers of a business to provide them with information to resolve inquiries regarding products and services. Additionally, they address and assist in resolving any client complaints. Client service representatives typically gather this data over the phone.
- **Business Development:** Business development, particularly in the technology industry, requires planned management, strategic marketing, and sales skills, as well as the collaboration of ALL personnel, including the CEO, project managers, the sales team, and development team.
- **Marketing Department:** Through this division, DataSoft is promoting itself. The customers are also given post-purchase support by this division.
- **Human Resource Department:** The department of an organization tasked with acquiring, training, and maintaining personnel is known as HR (human resources). These experts develop policies and guarantee that workers are happy in their positions. HR is crucial to the hiring of highly qualified software professionals in a software company.
- **Network Department:** This department oversees the network department of the company such local server management and sometimes project network system designing and testing.
- **Infrastructure Department:** The systems and people who make up an organization's core are designed, installed, maintained, and retired by the infrastructure department.
- **Software Development Department:** All the software is developed and maintained under this development. Every software engineer, developers are under this department.

2.7 Services of DataSoft Systems Bangladesh

DataSoft provides various kind of world class services it's national and international clients.

The services are as follows:

- **Software Development Solutions:**
DataSoft offers both specialized services and a world-class product portfolio to both profit-making and nonprofit organizations. by creating effective solutions that are tailored to the unique requirements of a broad range of our clients worldwide.
DataSoft has modified the CMMI L5 project management process in accordance with global standards. Additionally, DataSoft has a small group of qualified experts who work tirelessly to innovate and create new services for all of its clients.

- **Software Testing As A Service:**
DataSoft offers software testing in addition to software development. The testing engineers have a lot of expertise testing on both mobile and web platforms across many industries. Additionally, DataSoft has a stellar track record of satisfying customers and providing top-notch services.
DataSoft specializes on cutting edge technologies including IoT and Virtual Reality, as well as Fintech, MNCs, Port & Logistics. Over the years, we have worked with companies like Bangladesh Police, bKash, MetLife, Pedrollo Group, SDF, USAID, and numerous other national and international organizations to provide software testing services.
- **System Management & Implementation:**
DataSoft assists you in selecting the proper software that complies with all requirements and regulations and offers ongoing maintenance support. Conversion with DataSoft is affordable, quick, and results are guaranteed.
- **DataSoft Advisory Service:**
Additionally, DataSoft offers consultancy services in response to the shifting demands of its customers. Considering their requirements and what they need to develop further.
- **Infrastructure As A Service:**
Even the most complicated and demanding enterprises can rely on DataSoft's uninterrupted IT infrastructure. Advanced Data Centers, Cloud Management, and other IT Infrastructure assistance are all included in the package.
- **Education & Training:**
By offering top-notch learning, DataSoft assists clients in strengthening resources, developing capabilities, and enhancing team and organization performance on the job.

2.8 Products

DataSoft has a wide spectrum of products to cater your specific business needs. Some of them are as follows:

- Financial Ecosystem
 - MicroFin 360
 - Pay 365
 - AML Solution Suite
- Port & Logistics
 - TIMS
 - Port Management

- Virtual Reality
 - Cricket Simulation Game
 - Engine Assembly Simulation

- ERP-Smart Enterprise
 - Smart HRM
 - Smart Parole
 - Smart Assest

- Marketplace
 - E-Micromela

2.9 Contact Detail

DataSoft Systems Bangladesh Limited

Address: Rupayan Shelford (20th Floor), 23/6, Mirpur Road, Shyamoli, Dhaka-1207, Bangladesh.

Phone: 880-2-58151538, 880-2-58151542, 880-2-48121377, 880-2-48115029

Email: info@datasoft-bd.com

Website: <http://datasoft-bd.com>

Chapter 3

3. Company Culture and Carrying Out

3.1 Working Environments

The working environment is crucial for developing a successful career. The working environment in this office is excellent. My coworkers are all cordial and friendly. Everyone has their own place. Office provides all the necessary equipment's for a person.

3.2 Rules and Regulation

Employees may occasionally violate the rules established by the employer. Even if an employee breaks the rules in good faith, it adversely affects others' workflow. Employees at DatsSoft are bound to a unique set of rules and guidelines that must be followed at work.

3.2.1 Flexibility

DataSoft complies to a set of guidelines that is moderately strict. Most of the time, breaching a rule that doesn't harm anyone else or the project the employee is working on doesn't result in punishment.

3.2.2 Semi-Formal Attitude

Employees are urged to treat one another with respect and in a friendly manner.

Teams working internally that don't need to deal with clients should dress semi-formally, whereas teams dealing with external organizations should dress formally.

3.2.3 Office Schedule

The employees have ample flexibility with the office hours. Employees should arrive at the office between 10:00 and 10:30 AM and stay for at least eight hours after that. There are also breaks for lunch, prayer, and snacks. If the employee needs an urgent leave of absence and their work is not dependent upon then they can request it. If employees need, they can take work from home facilities.

3.2.4 Responsibilities

Everyone is given their own tasks to complete, thus each person is accountable for his or her own work. There is other more duties such as:

- Using tools and equipment carelessly could result in damage to office property.
- Any significant loss or damage to company property must be reported as soon as possible.
- Other private items must only be handled with his consent.

3.3 Recruiting Policy

I was invited to an interview by DataSoft, where HR, and a senior project manager interviewed me informally about my academic pursuits and personal preferences. After the informal interview, a senior software engineer questioned me about the things I had studied in college, the technologies I was working with at the time, the things I wanted to learn, and some interview questions to assess my skill sets. The interview was friendly and I was received quite well. A few days later, they phoned me to formally inform me that I had been accepted, and then they requested me to join and officially begin working.

3.4 Getting Started

On July 24, 2022, I began my career at DataSoft Systems Bangladesh as an intern. I've gained a lot of new development abilities and experience in this month that will help me as I start my career in the IT industry. I also gain expertise about client sites. I learned what I needed to do from this intern. I'm really grateful that I was given the chance to do that internship.

3.5 Evaluation Process

In order to offer me assignments, monitor my progress, and assist me in overcoming some of the difficulties I had during the first part of the internship period, a senior software engineer was designated as my mentor. Each assignment I had to accomplish had a soft deadline. I received some feedback for improvement based on my progress. I was given instructions by software engineers and project managers to execute tiny changes of code that had stringent deadlines after becoming familiar with the system and how everyone works.

Chapter 4

4. Software Development Life Cycle and Overview

4.1 Software Development Life Cycle

SDLC stands for software development life cycle. A software development life cycle is basically a series of steps that provide a model for development and its lifecycle management of an application or a software.

Every business has a different SDLC process strategy. To plan, design, create, test, and deliver systems, engineers use a software development life cycle, which is composed of a number of separate work phases. An SDLC seeks to offer systems that progress through each clearly defined phase within the anticipated time frame and at the lowest possible cost, producing high-quality systems that meet or exceed customers' expectations and fulfill their needs. Anything that is created on an assembly line is comparable to this.

The SDLC processes that are typically employed are waterfall and agile. The waterfall technique is more conventional and designs with a comprehensive plan and a certain set of criteria, whereas the agile SDLC starts with less stringent guidelines and then makes alterations as needed. Agile development is noted for its short turnaround times that enable it to quickly transform an application from a prototype to a finished product at practically any stage, making it more appropriate for applications that are frequently updated or improved.

Most of the software are being developed in agile SDLC but if a software is much more crucial and won't be changing it's features then waterfall SDLC is used.

The SDLC typically includes six steps. The steps are following:

- Requirement Gathering and Analysis
- Design
- Implementation
- Testing
- Deployment
- Maintenance

Requirement Gathering and Analysis: At this point, business requirements are gathered. This phase is where the project managers and other key players are mainly concentrated. Numerous meetings with managers, stakeholders, and users are held to establish the requirements, including who the system's users are, what data should be fed into the system, and what the system should output. All general queries are made at this stage. After gathering all the requirements, each one is analyzed to determine its legitimacy and viability for inclusion in the system that will be developed. Finally, a paper detailing the criteria is created as a set of guidelines for the model's next stage.

Design: The first phase's necessary specifications are utilized to prepare the second phase's system and software design. System design helps in figuring out the hardware and system requirements as well as the overall system architecture. The system design specifications are used as input in the model's subsequent phase. In this phase, testers create test strategies that outline what should be tested and how it should be tested while UX designers provide guidelines.

Implementation: The task is separated into units during this phase, and actual coding is started. The main priority for software engineers at this period is the production of the code. This is the stage of the software development life cycle that lasts the longest.

Testing: To ensure that the program is truly solving the issue it was designed to, the code is tested against the requirements after it has been written. All functional and non-functional requirements are tested during this phase, along with unit tests, integration tests, system tests, and acceptance tests.

Deployment: The program is marked for shipment once the testing phase is successfully completed, and then it is released to the production servers or app stores so that real customers may use it. The client may also include the best testing with customers here, depending on the client contract.

Maintenance: As soon as users begin utilizing the system, a real issue arises and periodically needs to be resolved. Maintenance is the process where the developed product is looked after. The length of this phase will depend on the agreement with the client.

4.2 Overview of My Tasks

An overall overview of what I have done through the internship period is given below.

For the first some days I was given some to documentation to study so that I can understand their coding approach and design methodology. After completing the study, I was assigned to create documentation for an ongoing project.

Then I was assigned to create some front-end pages for a project, then I was assigned to develop a part of website there I had to get complex data from back-end and by utilizing them I had to create some pages and chat type representation.

Then I was assigned to gather public data by scraping. For this I got some time to learn a scraping framework.

Then I was tasked to learn and create a small project with Django and Django Rest Frame work. After completing the project, I was assigned to a project where I had to fix authentication, authorization of a system. I also developed some API for the system.

In this period of learning I was assigned to team for field engineering where I was task to install software and run KMNS simulation and gather data from those machineries.

Chapter 5

5. Roles and Responsibility

5.1 Training and Knowledge Sharing

After a new project begins to take shape, the project manager outlines every facet of it. A complete spec sheet is also provided for enhanced comprehension. It is made obvious how to start, what to do, and what is required to focus on that project. Every day before we begin working, the project manager gives us a briefing. If I receive a project, this is tremendously flexible for me.

5.2 Projects

In this section I am going to talk about the projects that I was involved with.

5.2.1 Project 1(Ai In Arts)

This is an AI based project. It is essentially an NFT selling web site, which is a new venture of our company. Here a seller can create an NFT and upload it to sell. By using AI he can also generate some variation of his NFT and sell it here.

My Task:

- I was tasked to create 3 pages for this web site.
- I was provided with the figma design file to create the designated pages.
- They did not provide any API end point because of security reasons, so I took some pictures and made kind of a template for the pages.
- I had to setup redux store for the website as it is needed in this project for managing states.
- Implement slow loading

Technologies:

Front-End: React, React-Redux, CSS3

Back-End: Python, Django Rest Framework, MySQL

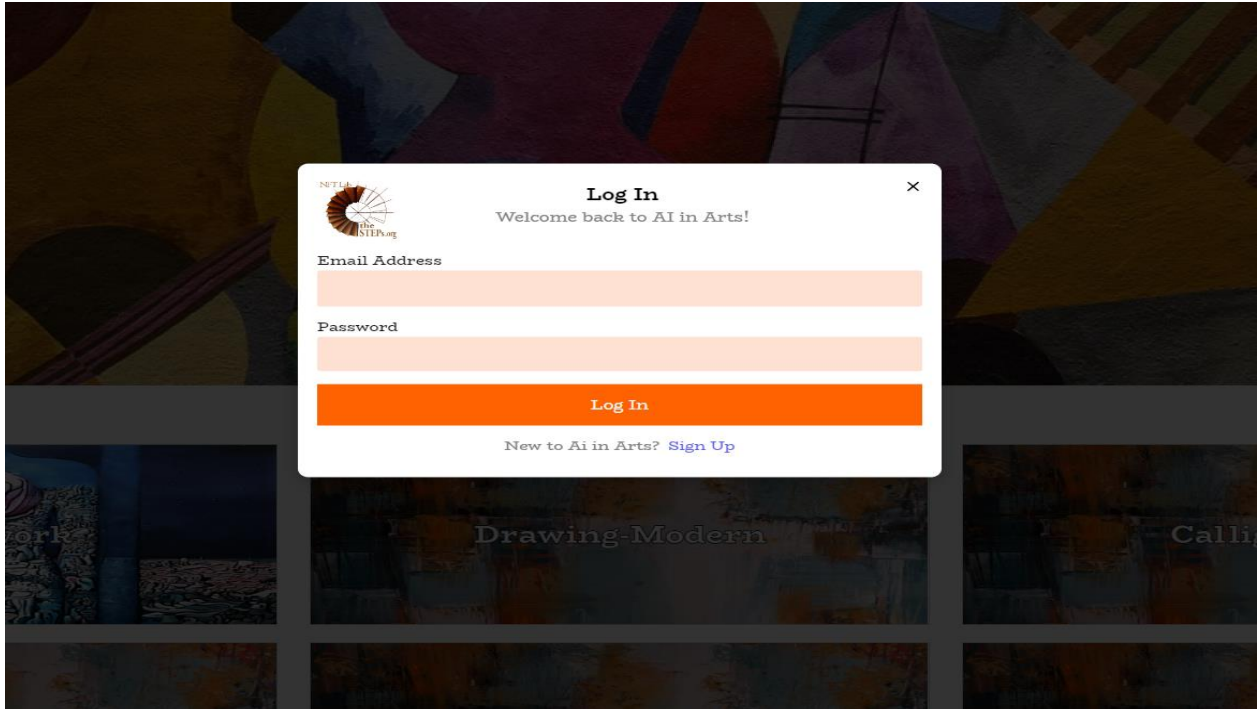
Challenges:

At first, I faced a challenge to gather pictures and translate the figma file as it was not well distinguished and API was not provided. I also face a challenge to setup the redux store.

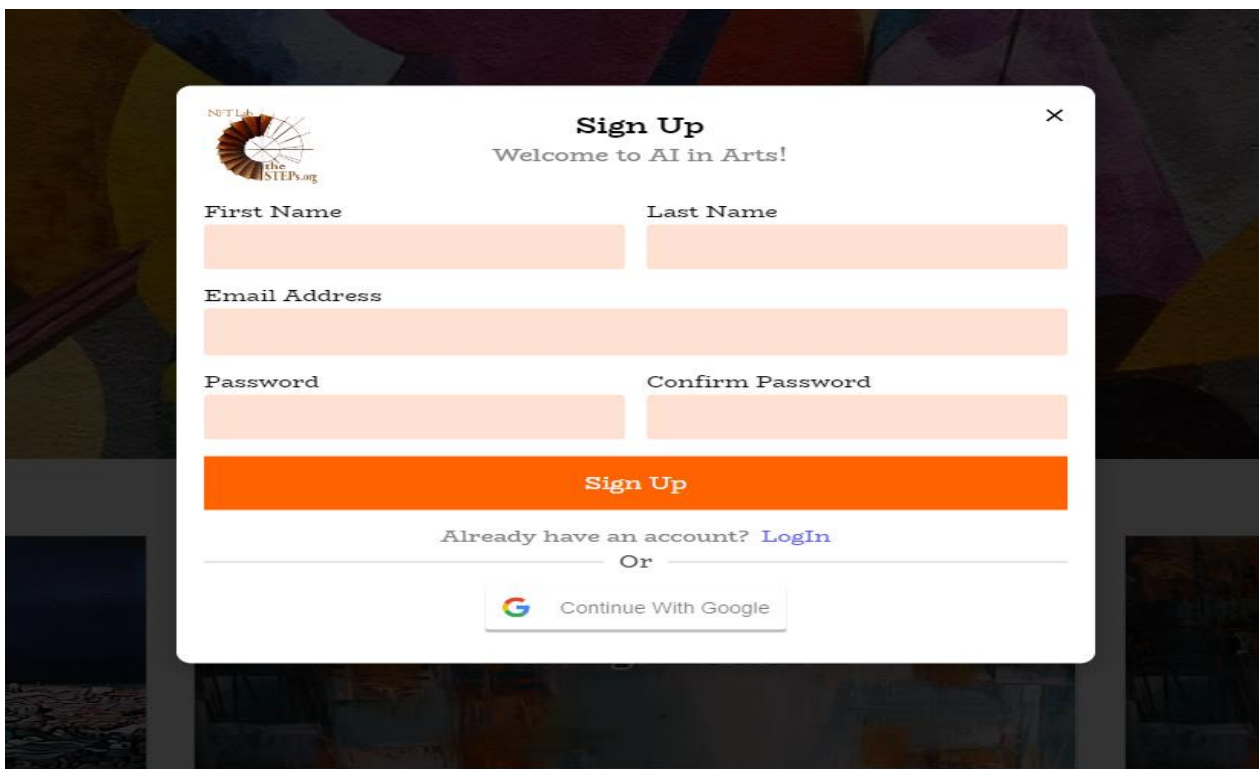
Because I had not use it previously. So, I had to learn and then deploy it. I had also faced problem in implementing slow loading or lazy loading.

5.2.1.1 Ai In Arts UI

Login Page



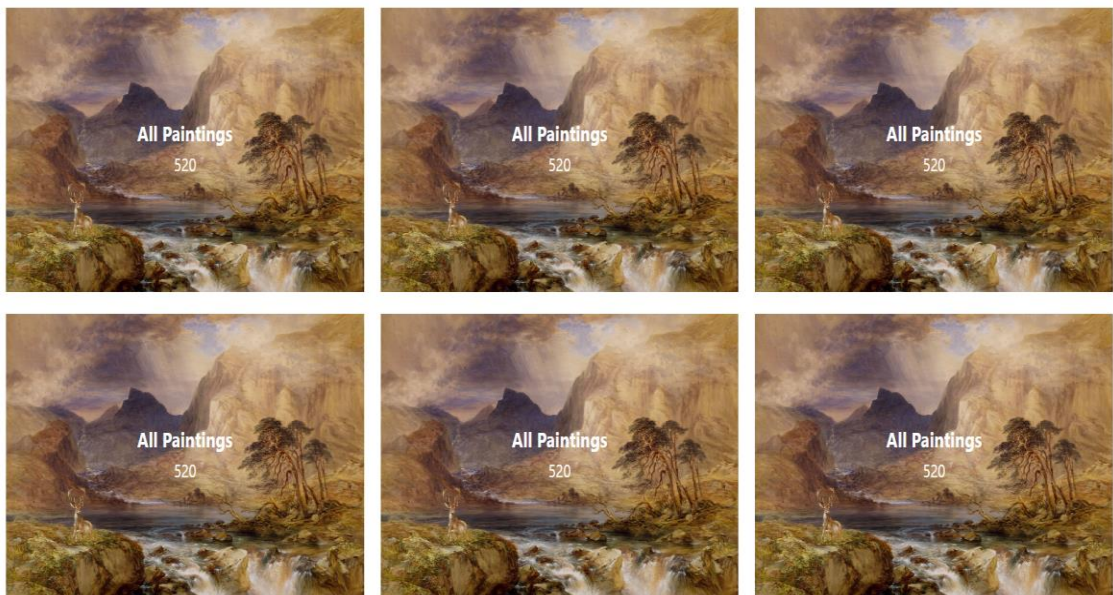
Sign Up Page



Landing Page

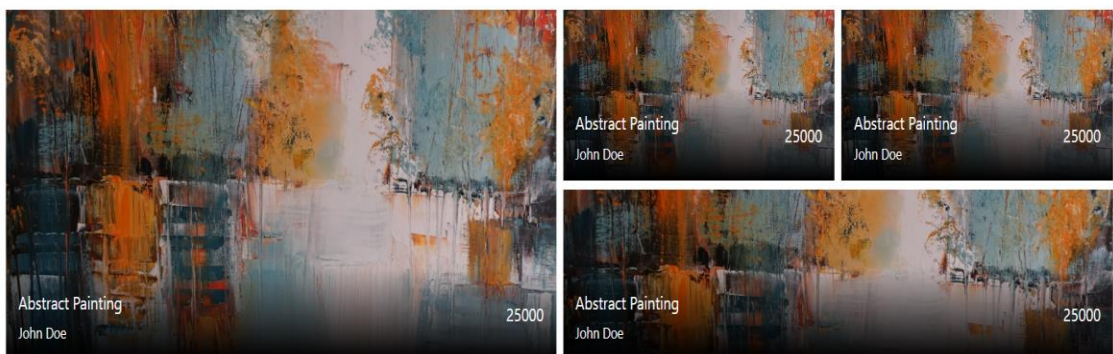


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It is a long established fact that a reader will be distracted by the readable content of a page when looking at its layout. The point of using Lorem Ipsum is that it has a more-or-less normal distribution of letters, as opposed to using 'Content here, content here', making it look like readable English.

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Abstract Painting
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15000



Abstract Painting
John doe
15000



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The Steps Art

Rupayan Shelford, 20th Floor, 23/6
Mirpur Rd, Dhaka 1207, Bangladesh
+880 2-9110136
info@datasoft-bd.com

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5.2.2 Project 2 (AirSense)

This is a project to monitor indoor and out door air quality. It is done in real time. It is mainly a software as a service. By this technology it is possible to check real time data of air such as temperature, humidity, carbon di oxide, flame able gas and VOC(toxic gas). This system also shows the location of devices installed. User can multiple devices and set up by himself. Just an admin needs to approve the newly installed devices. Some of the functionalities are given below:

- Add device
- Real time monitoring
- Show historical data
- Download data as csv, pdf, xl, jpeg and others format
- Show location of the device
- User management
- Devices management (user and admin level)
- Show average status on daily, weekly and monthly basis
- Filter the data according to user need
- Set interval between getting data

My Task:

- Fetch data from back-end
- Show those data on appropriate pages
- Implement filter on those data as per user
- Show graphical representation of the data with high chart library
- Show detail of the devices
- Send data to back-end after getting data from time interval

Technologies:

Front-End: React, High chart, CSS3

Back-End: Django Rest Framework, MySQL

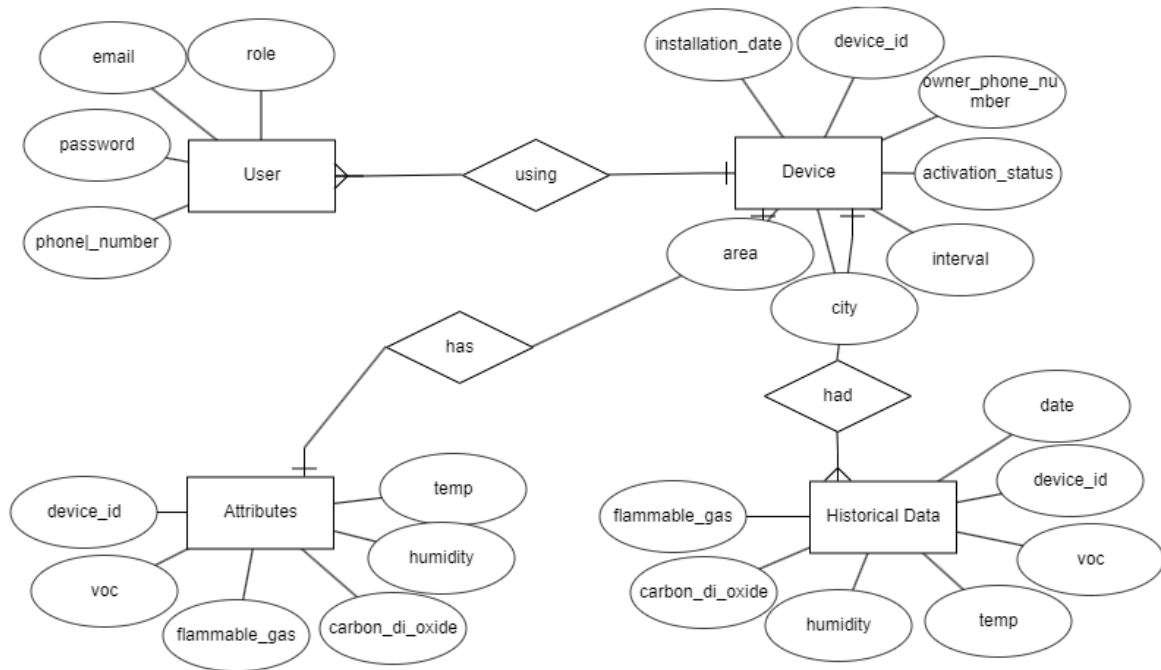
Challenges:

As I have done work with react previously, I did not face much of a problem with the framework. But representing data was a challenge for me. There I have learned how to use high charts library. Second challenge I faced was creating pdf which was done in front-end, and csv and others are done in back-end.

5.2.2.1 Use Case Diagram



5.2.2.2 ER Diagram



5.2.2.3 AirSense UI


Login Page

The screenshot shows the AirSense Login page. At the top, the AirSense logo is displayed. Below the logo, there are two input fields: "Username" and "Password". The "Username" field has a user icon and the placeholder text "Type your username". The "Password" field has a key icon and the placeholder text "Type your password". Below the password field, there is a link for "Forgot password?". A large blue button labeled "LOG IN" is positioned below the input fields. At the bottom of the page, there are two links: "Don't have an account? Sign up here" and "About AirSense".


Sign Up Page

SIGN UP


Username

 Enter username


Email

 Enter email


Address

 Enter address

City


 Enter City

Area

 Enter Area

[NEXT](#)

Have an account? [Sign in here](#)



SIGN UP

Device id

 e.g. db101

Phone

 Enter Phone No

Password

 Enter Password

Repeat Password

 Repeat Password

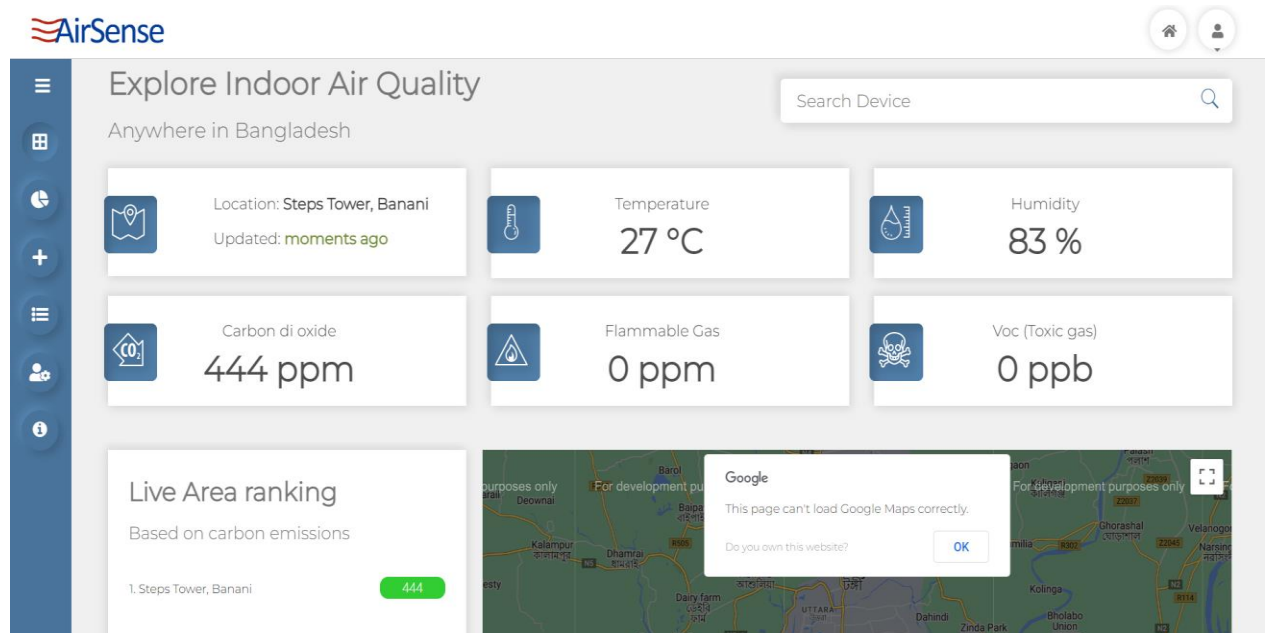
PREVIOUS

SUBMIT

Have an account? [Sign in here](#)

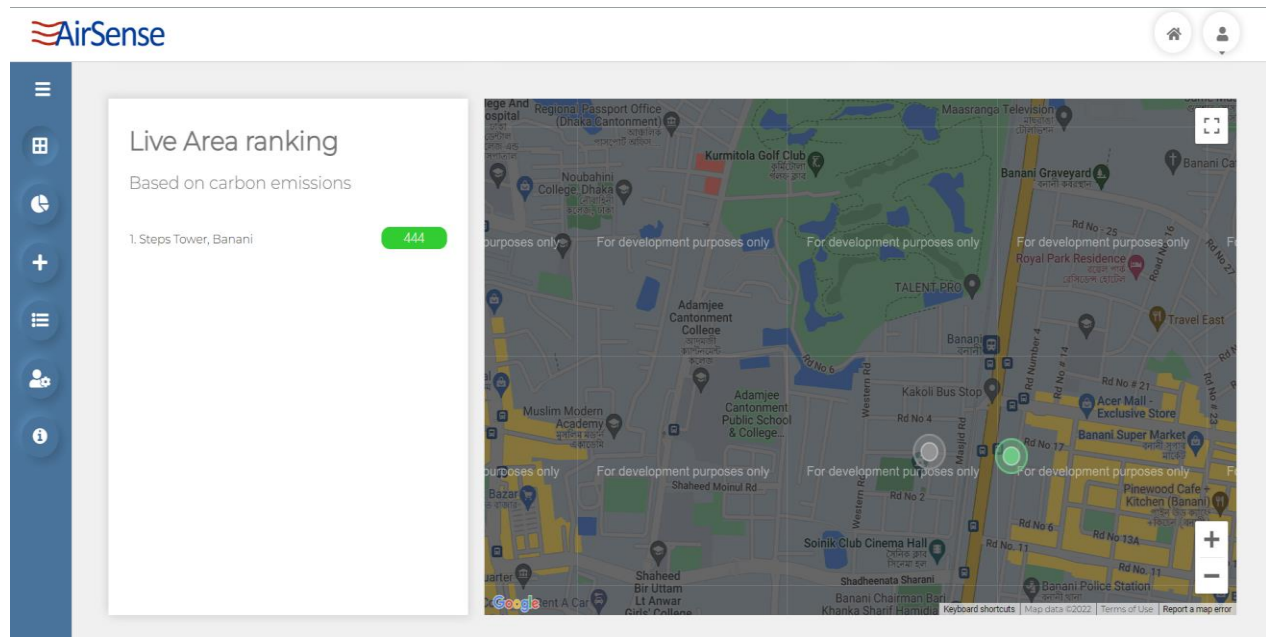


Landing Page



The screenshot shows the AirSense landing page with the following elements:

- Header:** AirSense logo, home icon, and user profile icon.
- Section:** "Explore Indoor Air Quality" with a search bar labeled "Search Device".
- Location:** "Anywhere in Bangladesh".
- Metrics:**
 - Location: Steps Tower, Banani. Updated: moments ago.
 - Temperature: 27 °C.
 - Humidity: 83 %.
 - Carbon di oxide: 444 ppm.
 - Flammable Gas: 0 ppm.
 - Voc (Toxic gas): 0 ppb.
- Live Area ranking:** "Based on carbon emissions". Rank 1: Steps Tower, Banani (444).
- Map:** A map of the area with a Google Maps error overlay: "This page can't load Google Maps correctly. Do you own this website? OK".



The screenshot shows the AirSense landing page with the following elements:

- Header:** AirSense logo, home icon, and user profile icon.
- Section:** "Live Area ranking" with a search bar.
- Location:** "Anywhere in Bangladesh".
- Metrics:** (Same as Screenshot 1).
- Live Area ranking:** "Based on carbon emissions". Rank 1: Steps Tower, Banani (444).
- Map:** A detailed map of the Banani area with a green circle highlighting the location of the Steps Tower. The map includes labels for "Kurmitola Golf Club", "Adamjee Cantonment College", "Kakoli Bus Stop", "Banani Super Market", and "Banani Police Station".



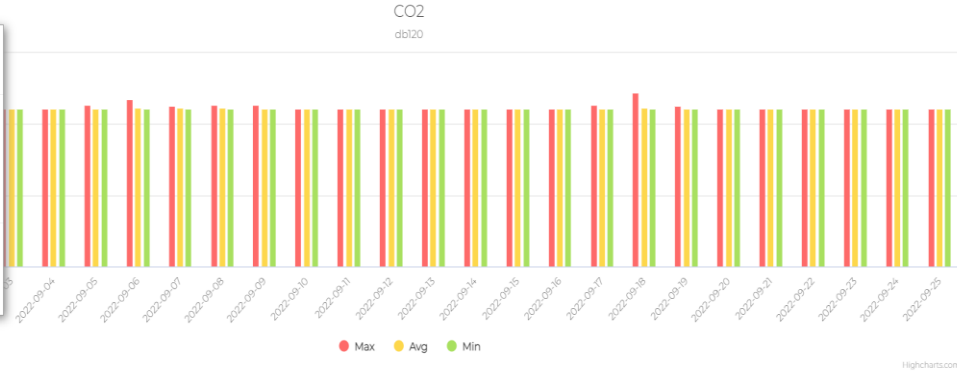
Historical Data





Device Id:
 Start Date:
 End Date:
 Device Value:

- View in full screen
- Print chart
- Download PNG image
- Download JPEG image
- Download PDF document
- Download SVG vector image
- Download CSV
- Download XLS
- View data table



Device Registration



Device Registration

Device id

City

Area



Device Registration

Device Owner Phone

Installation Date

PREVIOUS
SUBMIT

Device List

Active List
Inactive List

Active List

Show entries Search:

S/L No.	Device ID	City	Area	Device Owner Phone	Installer	Installation Date	Edit	Deactivate	Reset	Delete	Current Data Publish Interval (mins)	Change Data Publish Interval (mins)
1	db110	Dhaka	Steps Tower 4th Floor	01671115736	Mashuk	Jul 01, 2020					10	<input style="width: 50px;" type="text"/> Change
2	db120	Dhaka	Steps Tower, Banani	01624441666	Saiful Hasan	Jun 28, 2020					6	<input style="width: 50px;" type="text"/> Change

Showing 1 to 2 of 2 entries
Previous Next

User List



User Management

Show 10 entries

Search:

User Name	Address	Email	Phone	Role	Account Status	Edit	Delete
admin	Dhaka	admin123@gmail.com	027640870	admin	Active	Edit	Delete
demo	demo address	demo@gmail.com	01671122344	view only	Active	Edit	Delete
isam75	Mirpur DOHS	sami.islam@datasoft-bd.com	01726828950	view only	Active	Edit	Delete
mashuk	Mirpur 14	abc@gmail.com	0167115736	view only	Active	Edit	Delete
mashuk_view	Mirpur	abcd@gmail.com	0167115733	view only	Active	Edit	Delete
mizan	Baburail	ridwanmizan@gmail.com	01739129488	view only	Active	Edit	Delete

Showing 1 to 6 of 6 entries

Previous Next

5.2.3 Project 3 (SDS Enterprise)

This is actually a geofencing project. A user can sell and keep track products. He can see how many persons is working in field, how many owners of the field id under that branch or area, what kind of crops they are growing, prepared land for crops, how much crop is in store etc. The client is mainly an organization of this project. With this project even video surveillance is possible. Some of the requirements are given below:

- Show status on a dashboard
- Create barcode sticker and print
- Crate management (add, show status, register crate, return crate)
- Add shipment
- Receive shipment
- Shipment status
- Video surveillance
- User management (add, activate user, deactivate user, user list status)

My Tasks:

- Creating API for dashboard
- Maintaining and bug fixing of user related API
- Creating user activation, deactivation API
- Creating Authorization on back-end
- Adding forgot password functionality with SMTP service

Technologies:

Front-End: Angular, CSS3

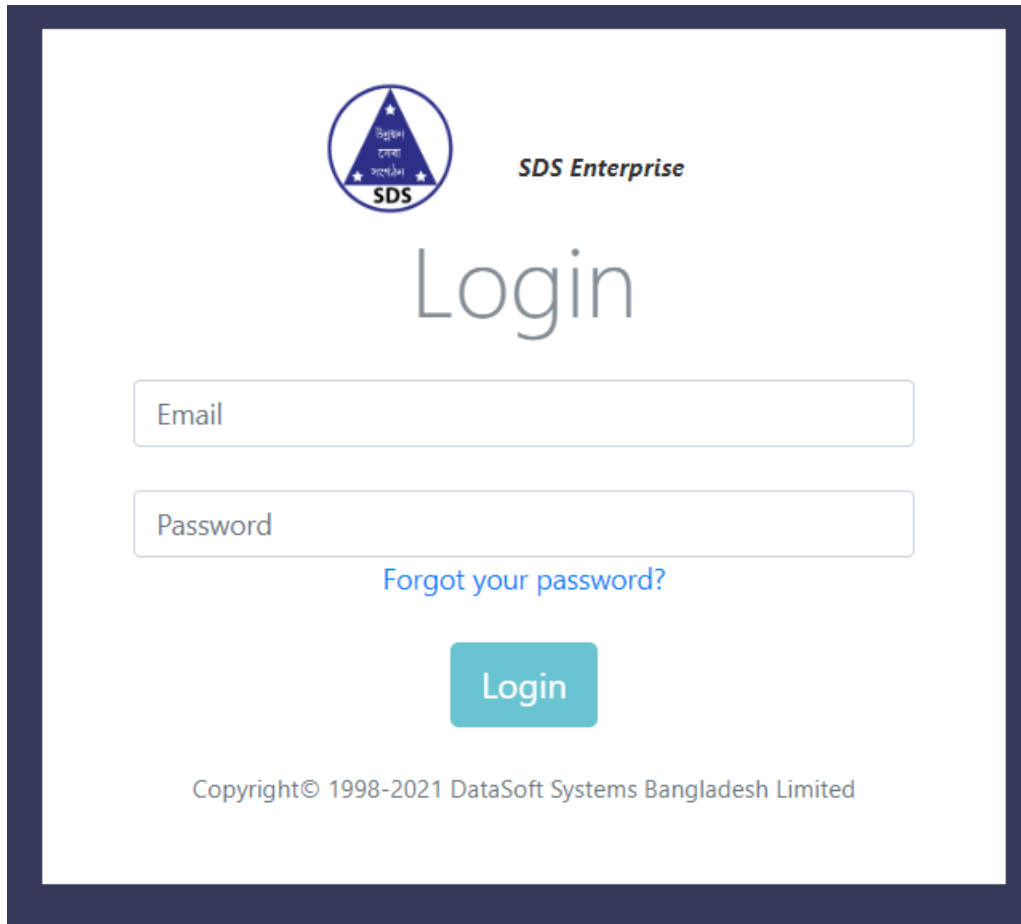
Back-End: Django Rest Framework, Swager, MySQL

Challenges:

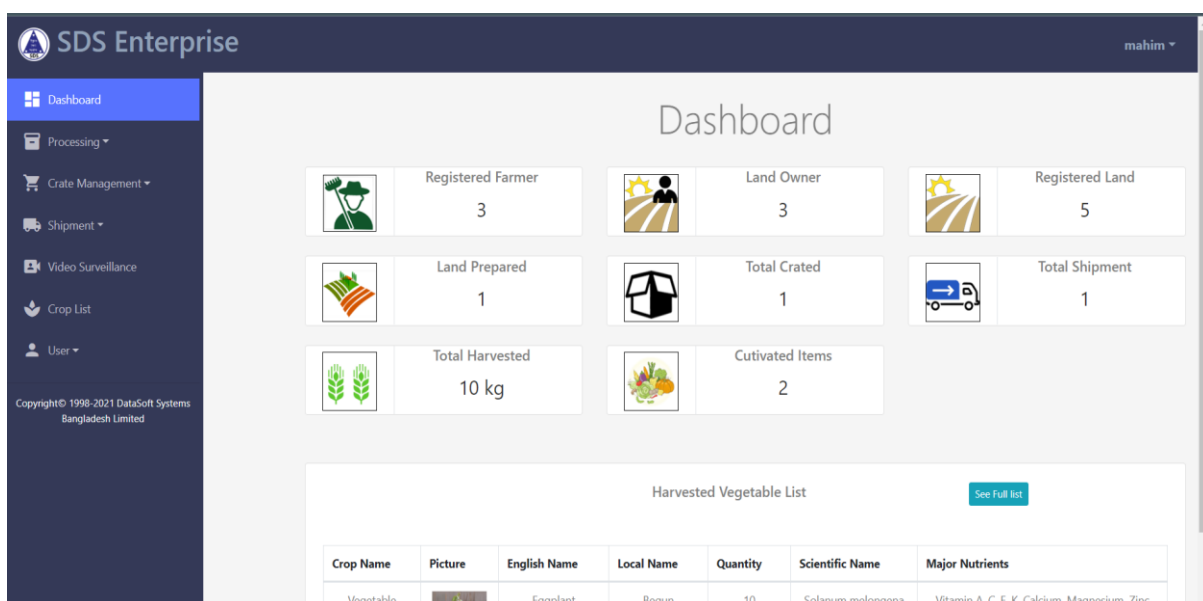
It was one of the most challenging because I had only the basics of python and I was adding at the middle of this project. I had to learn Django, Django rest framework for this project and gave me some times. I learned and did a small project and then assigned to this project. Seniors did help a lot to overcome this barrier.

5.2.3.1 SDS Enterprise UI

Login page



Dashboard



Create Sticker

SDS Enterprise mahim

Dashboard
Processing
Create Sticker
Print Preview
Reprint
Crate Management
Shipment
Video Surveillance
Crop List
User

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Packaging

From: 25-11-2022 To: 27-11-2023 Grain Gom Submit

Check	Date	Quantity
No Data Found		

Preview of Sticker

SDS Enterprise mahim

Dashboard
Processing
Create Sticker
Print Preview
Reprint
Crate Management
Shipment
Video Surveillance
Crop List
User

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Packaging Search

Oil Sorisha Submit

Check	Name	Packaging Unit	Unit Per Package	Processing Date	Processing ID	Total No of Sticker
No Data Found						

Crating

SDS Enterprise mahim

Dashboard
Processing
Crate Management
Crating
Crate List
Register Crate
Return Crate
Shipment
Video Surveillance
Crop List
User

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Crating

Crate Barcode

Package Barcode

Checked

Submit

Crate List

SDS Enterprise mahim

Dashboard
Processing
Crate Management
Crating
Crate List
Register Crate
Return Crate
Shipment
Video Surveillance
Crop List
User

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Crate List

All

Crate No.	Barcode	Net Volume	Production House	Registration Date	Status
88020001	4888611810227	5	SDS - Zajira1	2022-10-18 17:42	ready

1

Register Crate

The screenshot shows the 'Register Crate' page in the SDS Enterprise system. The sidebar on the left contains the following menu items: Dashboard, Processing, Crate Management, Crating, Crate List, Register Crate (highlighted), Return Crate, Shipment, Video Surveillance, Crop List, and User. The main content area has a header 'Register Crate' and a form with two input fields: 'Net Volume' and 'Select Production House'. A blue 'Register' button is positioned below the form. The footer of the sidebar includes the text 'Copyright © 1998-2021 DataSoft Systems Bangladesh Limited'.

Return Crate

The screenshot shows the 'Return Crate' page in the SDS Enterprise system. The sidebar on the left contains the following menu items: Dashboard, Processing, Crate Management, Crating, Crate List, Register Crate, Return Crate (highlighted), Shipment, Video Surveillance, Crop List, and User. The main content area has a header 'Return Crate' and a form with one input field: 'Crate Barcode'. Below the input field is a checkbox labeled 'Checked' and a blue 'Submit' button. The footer of the sidebar includes the text 'Copyright © 1998-2021 DataSoft Systems Bangladesh Limited'.

Add Shipment

The screenshot shows the 'Add Shipment' form in the SDS Enterprise web application. The interface includes a dark blue sidebar with navigation options: Dashboard, Processing, Crate Management, Shipment, Add Shipment (highlighted), Receive Shipment, Shipping List, Video Surveillance, Crop List, and User. The main content area is titled 'Add Shipment' and contains the following fields:

- Shipping Date:
- Arrival Date:
- Select Division:
- Select District:
- Select Upazila:
- Destination Address:
- Destination Contact:
- Shipping Agent:
- Shipping Contact:
- Crate Barcode:
- Checked
-

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Receive Shipment

The screenshot shows the 'Receive Shipment' form in the SDS Enterprise web application. The interface includes a dark blue sidebar with navigation options: Dashboard, Processing, Crate Management, Shipment, Add Shipment, Receive Shipment (highlighted), Shipping List, Video Surveillance, Crop List, and User. The main content area is titled 'Receive Shipment' and contains the following fields:

- Shipping Code:
-

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Shipping List

SDS Enterprise mahim

Dashboard
Processing
Crate Management
Shipment
Add Shipment
Receive Shipment
Shipping List
Video Surveillance
Crop List
User

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Shipment List

All

Shipping Date	Shipping Code	Destination Address	Destination Contact	Shipment Agent	Agent Contact	Total Crate	Status
2022-10-18 18:24	181022SOZFN1	khilkhet	01730290780	sagar	01730290780	1	received

1

Crop List

SDS Enterprise mahim

Dashboard
Processing
Crate Management
Shipment
Video Surveillance
Crop List
User

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Crop List

Grain
Pulse
Oil
Spices
Vegetable
Tuber
Fruit

Add User

The screenshot shows the 'Register' page in the SDS Enterprise application. The left sidebar contains navigation options: Dashboard, Processing, Crate Management, Shipment, Video Surveillance, Crop List, User, Add user (highlighted), User List, and Inactive User List. The main content area is titled 'Register' and contains the following form fields:

- Name
- NID
- Phone Number
- Address
- Email
- Password
- Select Role (dropdown menu)
- Select Production House (dropdown menu)
- Register (button)

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Active User List

The screenshot shows the 'User List' page in the SDS Enterprise application. The left sidebar contains navigation options: Dashboard, Processing, Crate Management, Shipment, Video Surveillance, Crop List, User, Add user, User List (highlighted), and Inactive User List. The main content area is titled 'User List' and displays a table with the following data:

Name	Role	Email	Phone Number	NID	Production House	Address	Status
Sds_Shariatpur	Super Admin	sds_shariatpur@gmail.com	01730290781	8674480039	SDS - Shariatpur	Dhaka	Deactivate
mahim	Super Admin	mahim323884@gmail.com	01793323884		SDS - Shariatpur	4B, 62 LGED Officer's Quarter, West Agargaon	Deactivate
mahim_test	Admin	mahim@gmail.com	01793323885	123456789123	SDS - Shariatpur	4B, 62 LGED Officer's Quarter, West Agargaon	Deactivate
mahim	Admin	mahim@test.com	01793323886	123456789124	SDS - Shariatpur	4B, 62 LGED Officer's Quarter, West Agargaon	Deactivate

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Inactive User List

SDS Enterprise mahim

Inactive User List

Name	Role	Email	Phone Number	NID	Production House	Address	Status
mahim_test	Admin	mahim@gmail.com	01793323885	123456789123	SDS - Shariatpur	4B, 62 LGED Officer's Quarter, West Agargaon	Activate

1

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User has been deactivated! ✕

User Profile

SDS Enterprise mahim

User Profile

Name
mahim

Email
mahim323884@gmail.com

Role
Super Admin

NID
01793323884

Phone
01793323884

Production House
SDS - Shariatpur

Address
4B, 62 LGED Officer's Quarter, West Agargaon

[Edit Profile](#)

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Forget Password

A verification code will be sent to your email after submission

Copyright© 1998-2021 DataSoft Systems Bangladesh Limited

Enter your verification code that has been sent to your email

Copyright© 1998-2021 DataSoft Systems Bangladesh Limited

5.3 Other Task

I was also assigned other task beside these projects; In this section I will talk about those tasks I was assigned.

5.3.1 Documentation

At the very first of my internship I was assigned to study some documentation of software. It was going on for a week and then I was assigned to create documentation. I create user manual for a software in this time.

Right now, I am assigned to two projects. In one of them I am doing development, bug fixing and I am studying the documentation of the other project.

5.3.2 ESG

ESG is a business-related project, where user can see detail about a company so that they can decide if they want to invest in the company or not. There were some criteria for those data most of them had to source from the public data so, we had to scrap those data from public website. I worked on this project to gather the public data by using scrapy framework.

5.3.3 Field Engineering

In middle of the internship, I was assigned to 2 days of field engineering. This project is related to ongoing project which I am assigned to now. In this time, I had to install proprietary software to machineries, collect the gathered data from those machineries and run KMNS simulation to gather prove.

Chapter 6

6. Experience & Achievements

6.1 Overcome Problems and Difficulties

While first coding, various issues and challenging circumstances are encountered. While completing such a different project during an internship, I encountered many different scenarios, issues, and challenges because I had never worked in any organization before. I managed to solve every one of these issues with the help of the team leader. Sometimes the team leader would offer documentation or videos to help with issues that needed to be resolved manually. Hours went by during this time, and eventually, with the team leader's leadership, certain solutions and outstanding problems were handled.

6.2 Ability To Learn

People can change to become immortal or standardized. In my instance, I also underwent a significant transformation. I have a remarkable capacity for learning, in one way or another. Computers forced me to learn about a few contemporary tools and technologies in a group setting, which was a really effective approach to learn about software development quickly. By going through this internship, I have come to know myself better. I have learned to learn and search to solve any problem.

6.3 Technology Enhancement

By going through the internship, I was able to improve many technologies. Before joining I was a beginner who only knew the basics. But this internship has given me the opportunity to learn and grow. From this experience I have learn advance javascript and many of its libraries. I have also learned a good amount of python from these experiences as well as its framework. Before this I only knew basics of java and java swing, but from the internship I have learned the spring boot framework. I only knew front-end of web development before the internship after completing I have come to know back-end also, which will be a good start to be a well learned full-stack developer.

6.4 Non-Technical Growth

Non-technical skill or soft skills give a good push on carrier. Those skills help to ennoble carry out technical skill and methods.

- Positive Attitude.
- Remain focused on tasks for long periods of time.

- Time Management.
- Team work.
- Build a network of relationships with other Developers.

6.5 Achievement

Before joining at internship, I was a beginner. After going through this period of time my skills have improved a lot, which is a big achievement for me. I have learned a lot of new things from these experiences. I have explored a new path for my carrier. Now I am confident enough to go on with the carrier I wanted. I had to reached office with in a certain time and complete my task with in a certain time, which has improved my time management skills. Like this a lot of other skills have improved more over I have make a lot of new connections. When I first started at the company, I did not know a lot of technologies which I have overcome. I have leaned completed task and delivered, which have improved my self-confidence. They have also offered me a job as Jr. Software Developer at the company, which is a huge gain for me. All of these experiences that I have gathered from the internship will help me a lot in future to pressure my future carrier and personal life.

Chapter 7

7. Conclusion

7.1 Concluding Statement

One word would best describe my time at DataSoft: "Humbling." DataSoft has a robust business network that extends both domestically and internationally, which has given me extensive knowledge of both domestic and international markets. Working there taught me how to be a team player, make the most of my time, and act professionally. This not only made it easier for me to see the career route I want to follow, but it also gave me more self-confidence. I picked up other soft skills and learned new technology thanks to the office's learning environment. I feel much more confident starting a new chapter of my life thanks to the experience I've gained over the past four months.

7.2 Recommendations

For recent graduates, the job market is competitive, particularly in nations like Bangladesh. There are many students who graduate each year as a result. But the majority of them struggled to land their ideal careers. One of the main causes of this problem is that they lack expertise dealing with a professional or business environment. An internship is a fantastic approach to get ready for the working world.

Any professional career is wonderful, whether it be in front-end development or back-end nonetheless, one needs have a firm grasp of fundamental programming concepts before starting.