

INTERNSHIP REPORT

FLOYD FERNANDES

2224

Internship at GYTWorkz

An Internship Report for

Course code and Course Title: CSA-652 Industry Internship

Credits: 16

Submitted in partial fulfillment of Master's Degree

Master of Computer Applications

By

FLOYD BAPTIST LAWSON FERNANDES

Seat Number: 22P0320015

ABC ID: 449651655436

PRN: 201708151

Under the Mentorship of

Mr Gandhar Sanzagiry

Goa Business School

Master of Computer Applications



Goa University

Date: June 2024

Examined by:

Seal of the School

DECLARATION BY STUDENT

I hereby declare that the data presented in this Internship report entitled, "Internship at GYT Workz" is based on the results of investigations carried out by me in the Master of Computer Application at GYT Workz, under the mentorship of Mr Gandhar Sanzagiry and the has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities will be not be responsible for the correctness of observations / experimental or other findings given the internship report/work. I hereby authorize the University authorities to upload this dissertation on the dissertation repository or anywhere else as the UGC regulations demand and make it available to any one as needed.



Floyd Baptist Lawson Fernandes

Seat no: 22P0320015

Date: June 2024

Place: Goa University

COMPLETION CERTIFICATE

This is to certify that the internship report "Internship at GYT Workz" is a bonafide work carried out by Mr. Floyd Baptist Lawson Fernandes under my mentorship in partial fulfillment of the requirements for the award of the degree of Master of Computer Application in the Discipline Computer Science & Technology at the Goa Business School, Goa University.

Signature and Name of Mentor

Date:

Signature of Dean of School/HoD

School/Department Stamp

Date: June 2024

Place: Goa University

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GYTWORKZ TECHNOLOGIES PVT LTD
4th Floor, Raghuma Towers, Madhapur
Hyderabad-500081, Telangana
Email: info@gytworkz.com
CIN No. U72900TG2019PTC134403



Letter of Offer

2nd January 2024

Floyd Baptist Lawson Fernandes
H.No: 723, Christian Wada, Marcel,
Goa - 403107

GYTWorkz is engaged in the design, development and sales of software products and services.
This letter defines the terms and conditions agreed between both the parties.

TERMS & CONDITIONS

- 1) This offer is effective from 2nd January 2024
- 2) This offer is for **Six months**. On completion of six months, based on your performance your internship may be concluded or extended or you may be converted to a full-time employee at mutual consent.
- 3) On conversion as a full-time employee based on your performance CTC would range from 4 LPA to 6 LPA.
- 4) Recipient agrees to work for minimum of 8 hours per day for project deliverables.
- 5) This offer may be terminated by either party by giving 15 days notice.
- 6) If you require leave during your period of work at the company, the same has to be pre-approved by your reporting manager.
- 7) Recipient agrees that he/she will be available for the Management/Customer calls which are related to specific assigned work/related to project.
- 8) If you're absent for over 5 consecutive days without your RM's approval, it's considered unauthorized. You'll receive a cautionary letter regarding company policy and be required to return to duty promptly. Failure to do so will result in being considered as absconding and voluntarily abandoning your services, leading to termination of your services with the company.
- 9) In addition to the above, the Company has the right to terminate your services without notice immediately, in case of any misconduct or breach of your duties and responsibilities.
- 10) Recipient agrees to take the responsibility of the quality deliverables of the assigned projects and meet the customer expectations.
- 11) GYTWorkz agrees to pay **INR 22222** per month, for the approved hours spent on the project.
- 12) Payment terms & conditions: Monthly payments will be processed as per the Approved Hours based on the invoice submitted. 10% of TDS is deducted.

For GYTWorkz Technologies Private Limited

A handwritten signature in black ink, appearing to read 'Rachana', with a stylized flourish at the end.

Rachana Kothapally
HR Business Partner
Human Resource Department

I have read and understood the terms and conditions, and hereby signify my acceptance of the same.

Signature: A handwritten signature in blue ink, appearing to read 'Floyd', with a stylized flourish at the end.
Name: Floyd Baptist Lawson Fernandes
Title: SDE-Consultant
Date: 29/12/2023



May 31, 2024

CERTIFICATE

This is to certify that Mr. Floyd Baptist Lawson Fernandes, a student of Goa Business School enrolled in the MCA program, successfully completed an internship focusing on "Full-Stack Development" at GYTWorkz Technologies Pvt. Ltd from January 2, 2024, to July 1, 2024.

During his internship, Floyd demonstrated a strong curiosity to learn and a high level of dedication. We wish him a successful career ahead!

A handwritten signature in black ink, appearing to be 'Floyd', is written over a light blue circular stamp.

Yours sincerely
GYTWorkz Technologies Pvt. Ltd

ACKNOWLEDGMENT

First and foremost, I would like to thank the Goa Business School, Goa University, for giving me the opportunity to carry out this internship and acquire real-world industrial experience. A special thanks to the teaching and non-teaching staff of the Goa Business School for their continuous support.

I am deeply grateful to GYT Workz Technologies Pvt. Ltd. for allowing me to do this internship and for considering me capable of working on such impactful projects. I would like to express my sincere gratitude to Mr. Bhasker Reddy Kottapally (CEO), Mr. Gandhar Sanzagiry (Principal Consultant). Their guidance, time, patience, support, and encouragement were invaluable throughout my internship.

I am also grateful to the members of my team, especially Mr. Ajit Mense (SDE-3) and Mr. Ajay Krishna (Product Manager), for their help and encouragement, which significantly contributed to the success of my projects. Additionally, my heartfelt thanks go to all the employees at GYTWorkz Technologies for their attention, time, and the welcoming environment they provided.

I also extend my gratitude to the HR team, including Mrs. Rachana Kotthapally, Mr. Bharadwaj Sukenapelly, for making me feel comfortable, accepted, and valued in a new environment.

I would like to thank Dr. Jyoti D. Pawar (Dean, Goa Business School), Mr. Hanumant Redkar (Professor and placement incharge, MCA), Mr. Ramrao S. Wagh (Program Director, MCA), for their constant encouragement and support during my project work.

Finally, I wish to express my deepest appreciation to my family, teachers, and friends. Their wholehearted support and involvement made this internship a successful and memorable experience.

This internship has been a significant milestone in my career development. I aim to use the knowledge and skills I have gained to achieve my future career goals.

Thank you all for your unwavering support and guidance.

Executive summary

This report summarizes my enriching full-time, on-site internship at GYT Workz Technologies Pvt Ltd, Goa, which commenced on January 2, 2024. It serves as a comprehensive record of the projects I undertook, the tasks I completed, the knowledge I gained, the challenges I faced, and the valuable experiences I accumulated throughout this internship period.

The initial chapters will provide an in-depth overview of GYT Workz, its work environment, and the company culture I immersed myself in. This will be followed by a detailed exploration of the specific projects I actively participated in. Each project description will outline the key components I built, the tasks I undertook within those components, and the technologies I utilized to contribute effectively. This section will highlight the impact of my work on the project's progress and how my contributions benefitted the organization as a whole.

Following the project details, I will delve into the specific tools and technologies I employed during my internship at GYT Workz. This will provide valuable insights into the technical skillset I developed and honed throughout the program. Finally, to offer a comprehensive picture of my internship journey, I will include a detailed internship diary/timeline that chronicles the key milestones and learnings along the way.

In conclusion this report aims to showcase not only the technical skills I acquired during the internship but also the personal and professional growth I experienced. It will demonstrate my ability to adapt to new environments, tackle challenges, and contribute meaningfully to a team. I believe this internship at GYT Workz has been a pivotal experience in shaping my professional trajectory, and I am confident this report will effectively capture its significance.

CHAPTER 1: ORGANIZATION

1.1 BIRDS EYE VIEW

Name of Company: GYTWorkz Pvt. Ltd.

Corporate Headquarters: The Platina, A Block, 3rd floor, 303, Gachibowli, Hyderabad, Telangana 500032

Phone Number: +91 98496 89798

Email ID: support@gytworkz.com

Website: www.gytworkz.com

GYTWorkz is a dynamic product engineering company founded in 2019, dedicated to designing and developing cloud-based solutions. Embracing the philosophy that "Cloud is not a location; it is a Method," GYTWorkz positions itself as a vital partner for startup founders, translating innovative ideas into reality.

Who We Are:

Comprising a team of engineers, designers, and management professionals, GYTWorkz is committed to delivering high-quality products. Our diverse backgrounds enrich our experience and enable us to provide exceptional solutions. Our passion for problem-solving drives our mission to excel.

What We Do:

At GYTWorkz, we pride ourselves on building top-tier products and solutions that exemplify quality. By combining youthful energy with seasoned expertise, we create value for our clients.

Why Us:

We prioritize understanding our clients' needs and delivering cutting-edge solutions. Our empathetic approach ensures that we provide top-class tech solutions, fostering growth for our clients.

Our Impact:

Since inception, GYTWorkz has collaborated with startups, playing a pivotal role as a tech co-founder. We have successfully delivered solutions in application engineering, mobile app development, and data platforms for global companies, driving innovation and excellence in the tech industry.

1.2 PRODUCTS/ SERVICES

1. Cloud Solutions:

Leveraging AWS and Azure services, we provide comprehensive cloud solutions, including setup, management, and optimization for peak performance and cost-efficiency.

2. Application Engineering:

We offer web development using modern frameworks such as Angular, React, and vue.js, ensuring robust and scalable applications. Our expertise extends to backend development with proficiency in NodeJS and Java.

3. Mobile App Development:

From native Android and iOS applications to cross-platform development using React Native and Flutter, we deliver intuitive and engaging mobile experiences.

4. Data Platforms:

Our services include designing and implementing efficient data pipelines and developing advanced analytics and BI solutions for informed decision-making.

5. IoT Solutions:

We provide innovative IoT solutions that enhance operational efficiency and create new business opportunities through device connectivity and automation.

6. Performance and Cost Optimization:

We specialize in optimizing cloud performance and reducing cloud expenses without compromising on reliability and scalability.

Partnerships with Startups:

As a tech co-founder, we help startups realize their visions, fostering growth and innovation in the startup ecosystem.

CHAPTER 2: TASKS HANDLED

2.1 PROJECT - LOG DASHBOARD

2.1.1 Overview

This was a client project that focused on developing an dashboard for a web-application portal with the following key features:

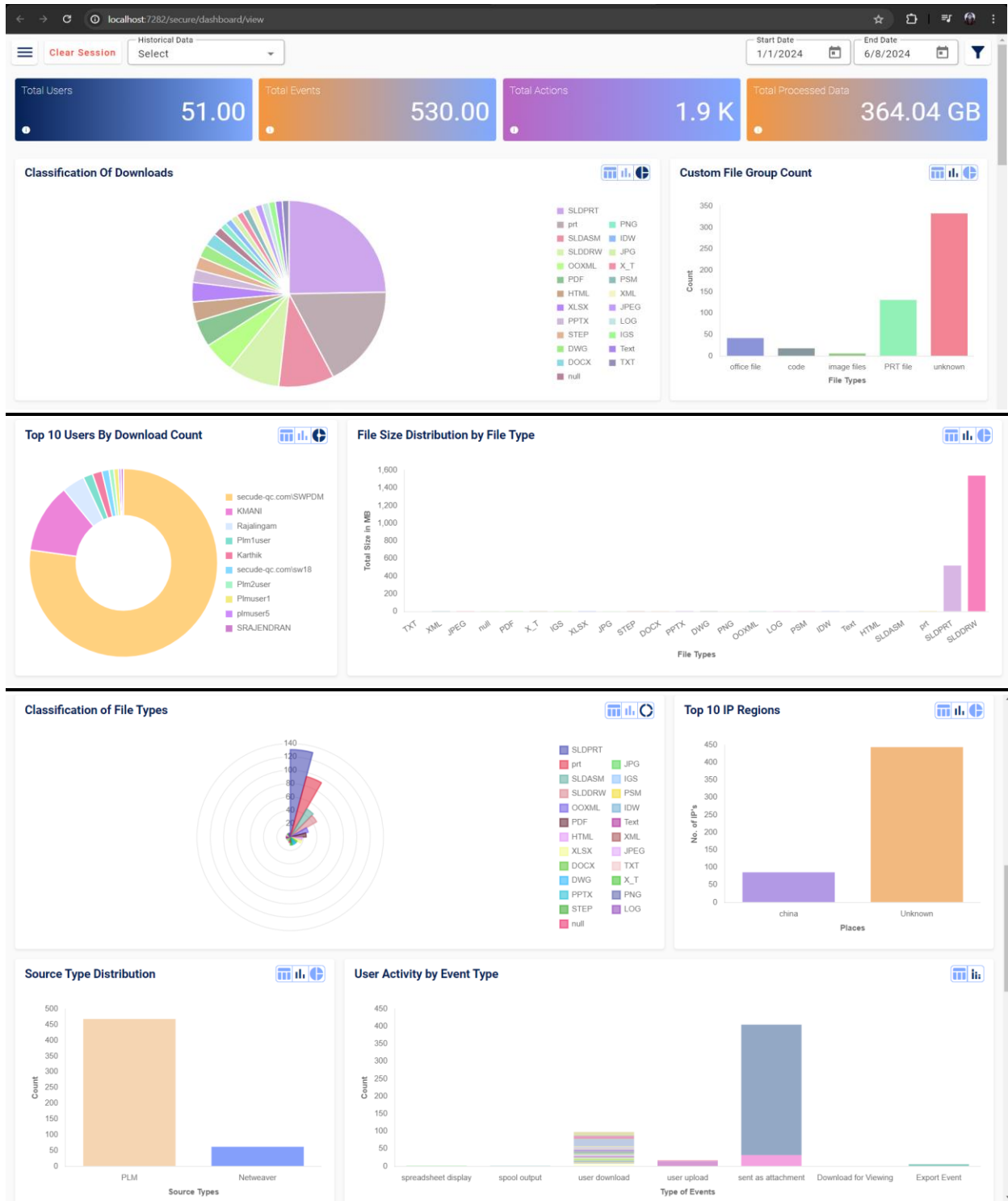
1. File Format Flexibility: Users can upload log files in various formats, including JSON, LEEF, and CEE.
2. Sentinel Events Integration: Additional dashboards will be created to display Azure Sentinel Events.
3. Future Database Integration Support: The system will be designed to easily incorporate additional databases, ensuring adaptability and coherence with existing dashboards.
4. File Size Handling: The system will handle log files ranging from kilobytes to gigabytes seamlessly.
5. Structured Log Management: Log files must conform to a pre-defined, structured format. Users can choose from various supported log formats to ensure compatibility and ease of use.
6. Asynchronous Processing: Log files will be processed asynchronously. Post-processing, the system will present log data through interactive charts and graphs with advanced filtering options.
7. Seamless Integration: The log dashboard will be embedded into the existing web application using a provided code snippet, maintaining security through existing OAuth2 authentication protocols.

2.1.2 My contribution

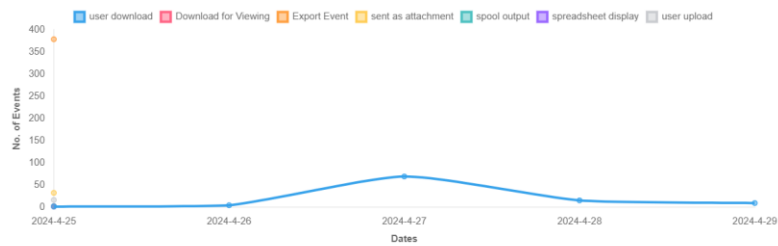
I initially started working on the frontend, where I first designed the basic wireframe in Figma and then proceeded to make the cards for the various charts in angular. I was then given the responsibility to work on the backend where I had first started working in express. I also

- Set up the backend boilerplate.
- Initialized a git repository.
- Created basic file structure.
- Created API for file upload and storing the data in mongo database.
- Created dynamic filters
- Made models to store data in the database
- Created models for the JSON, CEF and LEEF logs to store the data in the database
- Migrated the express code to java
- Had weekly meetings with the client where we would give the updates and show demo of the recently developed products.
- Write and test aggregation function to retrieve data from the mongo DB
- Created APIs that would fetch the required data from the db and send to frontend
- Created CRUD Apis for File and IP mappings
- Wrote cron jobs in java for remote file uploading and deleting
- Fixed issues where data would not get stored or would return duplicated data

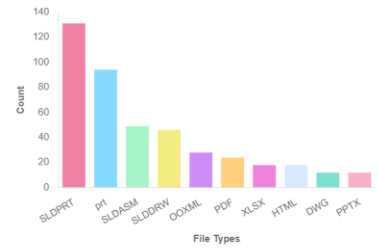
2.1.3 IMAGES



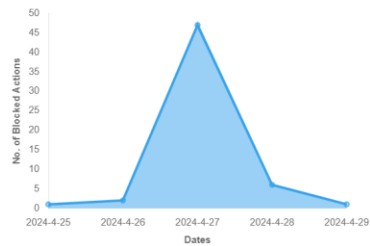
Event Action Over time



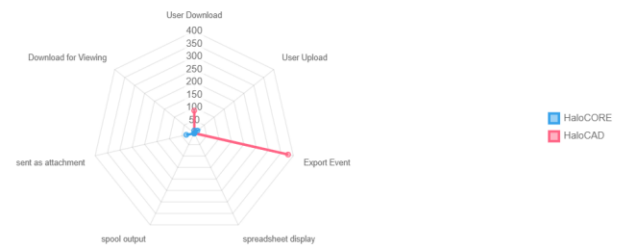
Top 10 File Types



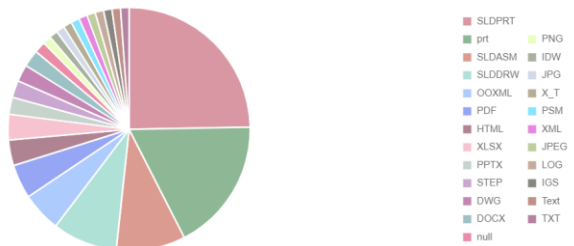
Blocked Actions Over Time



Event Distribution by Product



Classification of Uploads



2.2 PROJECT - IDAHO WEB

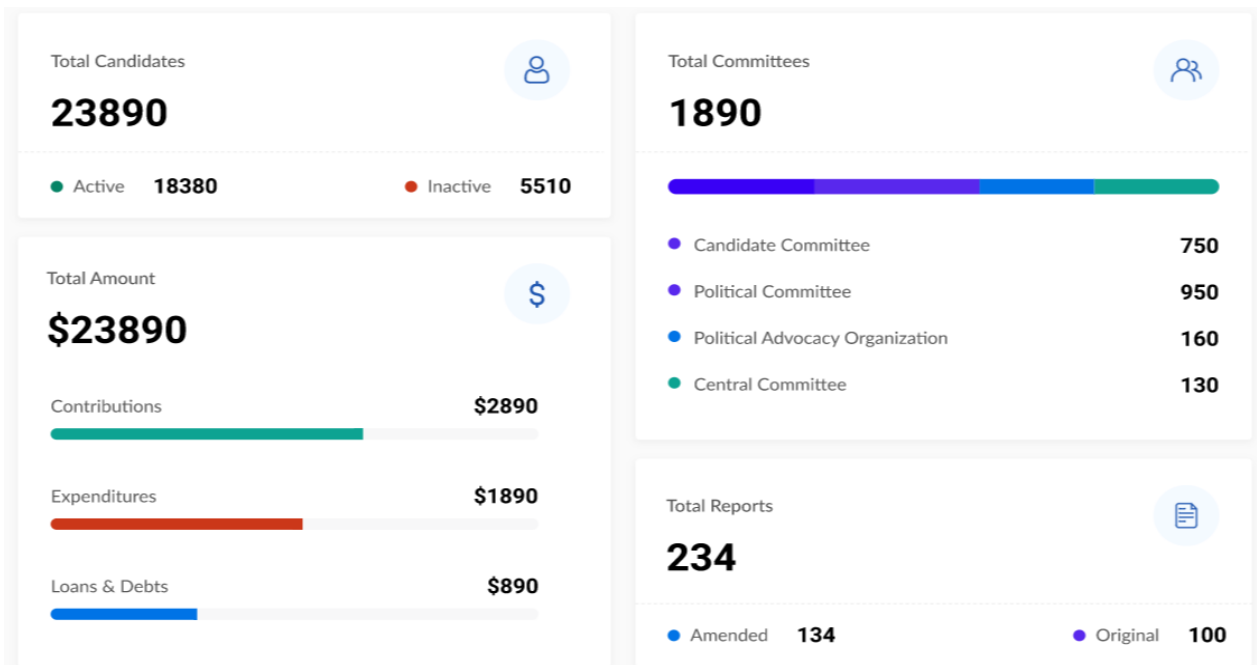
2.2.1 Overview

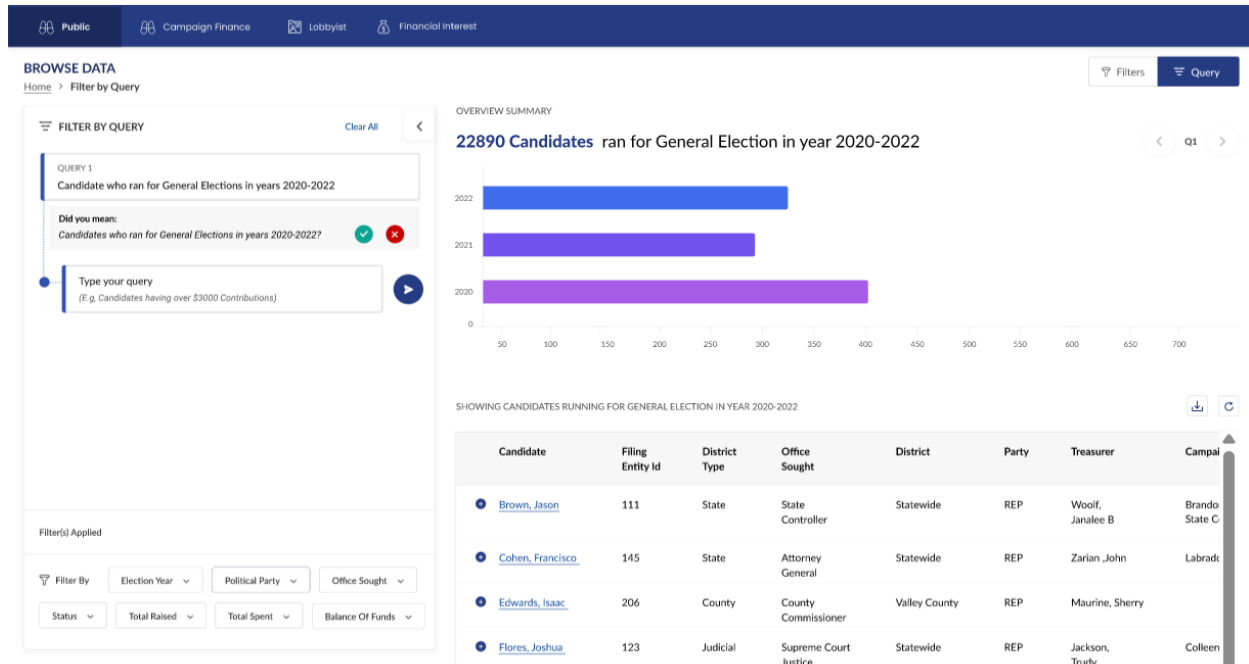
This was an ongoing project and inside that web application there was a POC made, and I had to make some widgets as per the Figma design and plot the graphs. The data would be sent from the backend.

2.2.2 My Contribution

- made the widgets assigned to me as per the Figma designs.
- Plotted the graphs from the data that I got from the Apis.
- Made transformations to the data before mapping it to the front end.
- Fixed some UI issues.
- Added UI components and icons using angular material UI.

2.2.3 Images





2.3 TASK - Creating custom components library

2.3.1 Overview

I was told to design a custom input and UI components library, which could be used in any frontend framework, but the first task was to get it in angular.

2.3.2 My Contributions













- Designed and documented UI components in Figma
- Developed the components in angular
- Tested the UI components in angular storybook

2.3.3 IMAGES

Properties

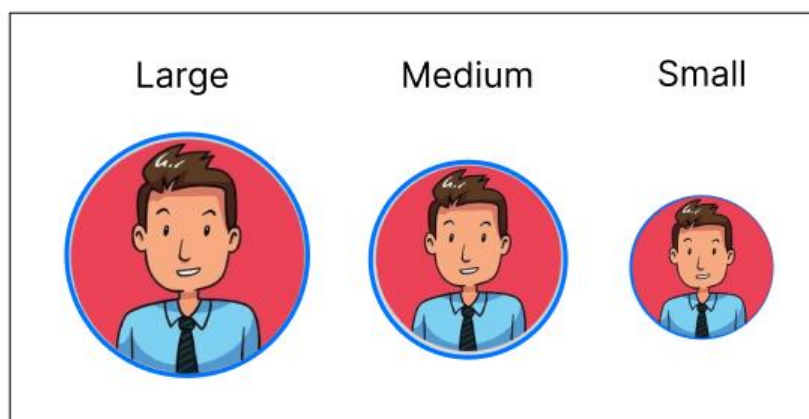
Name	Description	Default	Options
Type	The type of Input field user requires	phone_no	email, phone_no, url
Label	Input Label	Input	"Any String"
Color	The theme of the input	primary	primary, accent, warn
Hint	What hint you want to display to the user	" "	"Any String"
Size	How large should the Input be?	medium	Large, small, extra small
Disabled	Whether the input is Disabled or not	false	true, false
Error_msg	What error you want to display while validating	" "	"Any string"
Is_required	when field cannot be empty, some input from user is required	false	true, false
placeholder	The text to be displayed in the input area	" "	"Any string"
FormControlName	Form control element by name	Input_ph	"Any string"
prefix	what prefix to display in the input	" "	"Any String"
suffix	what suffix to display in the input	" "	"Any String"

Button

Basic	Primary	Accent	Warn	Disabled
Raised				
Stroke				
Flat				

Button Size

Large	Medium	Small
		



2.4 TASK - Binding data from Apis in react

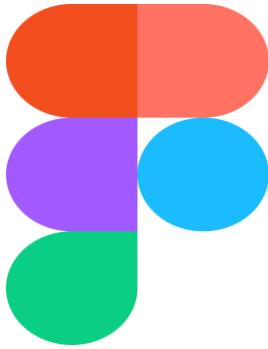
2.4.1 Overview

This was an ongoing project that was a system for candidates to apply for interviews and job openings. In this web app the front end was already made and functional, it contained various widgets such as tables, search bar, filters , appointments, but the data in the front end was static and was hardcoded for all the elements , the goal was to get the data from the APIS and populate the front end with this data so that it would be dynamic.

2.4.2 My Contribution

- Set up the HTTP routes to fetch the data.
- Fetch the data from the API and link it to the front end.
- Make all the interfaces required to model and store the data.
- Populate the front-end tables and dropdowns using this data.
- Made a form to accept and send data.

CHAPTER 3: TOOLS & TECHNOLOGIES USED



Figma - Figma is a collaborative interface design tool that allows you to create and collaborate on user interfaces and prototypes. Figma enables teams to work together in real time



Postman- Postman is an API (Application Programming Interface) development tool that helps build, test, and modify APIs. It simplifies the process of testing APIs by providing a user-friendly interface for making requests, viewing responses, and debugging issue



MongoDB and MongoDB compass-As a document database, MongoDB makes it easy for developers to store structured or unstructured data. It uses a JSON-like format to store documents. MongoDB Compass is a powerful graphical user interface (GUI) tool designed to make working with MongoDB databases more intuitive and accessible



Spring boot- Spring Boot is a Java framework that simplifies the creation and execution of Java applications. It is easy to create stand-alone, production-grade Spring-based applications that you can “just run.” You don’t need to deploy WAR files; instead, you can embed servers like Tomcat, Jetty, or Undertow directly.



Node js- Node.js is an open-source, cross-platform JavaScript runtime environment used for executing JavaScript code outside of a web browser



Angular- Angular is a powerful framework for building user interfaces. Whether you’re creating web applications, mobile apps, or desktop applications, Angular provides the building blocks to help you set up maintainable, scalable apps.



Storybook for Angular is a powerful framework that simplifies the development and testing of UI components in isolation for Angular applications. It allows developers to create and test UI components independently. Each component lives in its own sandbox, making it easier to focus on one piece of functionality at a time.



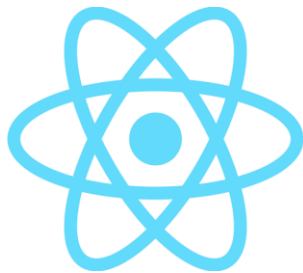
Jira is a versatile project management tool developed by Atlassian. It serves as a centralized platform for managing tasks, bugs, and other types of issues across various teams and projects.



GitHub is a web-based platform that provides version control using Git. It allows multiple people to work on projects simultaneously, track changes, and collaborate on code.



Chart.js is an open-source JavaScript library that allows developers to create interactive charts and graphs for web pages. It simplifies the process of visualizing data by providing customizable chart types. Chart.js automatically redraws charts when the window is resized, ensuring perfect scale granularity



React, also known as React JS, is a JavaScript library used to develop user interfaces (UIs). When you interact with a website or application, the UI is what you see and engage with. React simplifies the process of creating dynamic and interactive UIs by providing a powerful set of tools and features



TypeScript is a superset of JavaScript that enhances JavaScript by adding static typing, making it more robust and maintainable. Static typing, allows devs to specify the types of data being passed around within the code. Unlike JavaScript, TypeScript helps catch type-related errors during development.

express

Express.js, also known as Express, is a back end web application framework for building RESTful APIs with Node.js. It is released as free and open-source software under the MIT License. It provides a solid foundation for creating server-side components of web-based systems.



Angular Material is a UI component library for Angular JS developers. Angular Material components help in constructing attractive, consistent, and functional web pages and web applications while adhering to modern web design principles like browser portability, device independence, and graceful degradation.



strapi

Strapi is an open-source, Node.js based, Headless CMS that saves developers a lot of development time while giving them the freedom to use their favorite tools and frameworks.

CHAPTER 4: LEARNINGS

4.1 SKILLS GAINED

- **Effective Communication and Help-Seeking:** I improved my ability to communicate clearly with team members and ask for help when needed, fostering a supportive and productive work environment.
- **Efficient Debugging:** I developed efficient debugging techniques, enabling me to quickly identify and resolve issues in the code.
- **API Integration:** I learned how to bind APIs, which involved integrating various services and ensuring seamless data flow between them.
- **Design Skills in Figma:** I acquired skills in using Figma for designing user interfaces, enhancing the visual appeal and usability of the application.
- **Issue Identification and Resolution:** I became proficient at identifying and fixing issues within the code, ensuring the smooth functioning of the application.
- **Version Control with Git and GitHub:** I learned to properly use Git and GitHub for version control, facilitating efficient code management and collaboration with team members.
- **Backend Validations:** I gained experience in implementing backend validations to ensure data integrity and improve the application's security and performance.
- **Code Documentation:** I improved my skills in documenting code, making it easier for others to understand, maintain, and extend the codebase in the future.
- **Knowledge Transfer to Clients:** I learned how to effectively communicate with clients in a professional manner, providing them with knowledge transfer sessions to ensure they understood the product and could use it effectively.

CHAPTER 5: CHALLENGES

Throughout my internship, I had to face several challenges, as stated below:

1. Writing Minimal Efficient Code: Coming up with efficient and minimalistic code was a massive challenge. It required careful consideration of balancing readability, performance, and functionality, often necessitating frequent refactoring.
2. Meeting Deadlines: Efficient time management and meeting project deadlines were difficult. This required strong organizational and time management skills to multitask, balance responsibilities, and complete research work in due time.
3. Limited Time for Research: Not having ample time to research specific issues made it difficult to investigate new technologies and methodologies. This required rapid adaptation and learning on the go, often with concise and practical learning resources.
4. Migrating JavaScript Code to Java: My limited knowledge of Java posed a significant challenge when migrating JavaScript code to Java. This required extra effort to learn and adapt to Java's syntax and conventions.
5. Writing Aggregation Functions in MongoDB: Writing aggregation functions and verifying them in MongoDB Compass was challenging. It required a deep understanding of MongoDB's query language and the ability to test and debug complex queries.
6. Understanding an Undocumented Codebase: Understanding the codebase written by other engineers, which lacked proper documentation, was another challenge. It involved a lot of time and effort to decipher the code and understand its functionality.

7. Asking for Help: Initially, I found it challenging to ask for help when I encountered problems. Overcoming this required building confidence and realizing the importance of collaboration and seeking guidance to ensure project success.

Despite these challenges, through determination, proper time management, the help of ChatGPT, and consistent learning, I overcame all obstacles. This perseverance led to the successful completion of the projects and tasks assigned to me.

CHAPTER 6: INTERNSHIP TIMELINE

JANUARY 2024

Week 1-3

- Learn the basic of TS.
- Understand TS generics.
- Understand Http sockets.
- Learn angular.

Week 4

- Learn the architecture of WebRTC.
- Explore the working of it and get a good understanding of it.
- Exploring the different types of Design Patterns and when to use them.

FEBRUARY

Week 1-2

- Designed a custom UI library
- Documented designs with descriptions and features
- Utilized Storybook to showcase component behavior and facilitate interactive testing
- designed over 10 reusable UI components using Figma
- Learned to use strappi with react

Week 2-5

- Worked on a live project
- Created widgets in a angular
- Created UI components such as cards and tables
- Utilized chart.js for the rendering of graphs
- Fixed some UI issues

MARCH

Week 1-3

- Worked on a project that needed to be refactored with latest technology
- Was in Koa 2 and vue
- Needed to use Express and react
- Worked on refactoring the backend
- Used postman for testing the API

Week 4

- Revised node js to work on upcoming client project
- Revised angular for the same
- Understood client requirements
- Understanding the CEF and LEEF logs

APRIL

Week 1

- Started with the project structure
- Created xls sheets to create json , CEF and LEEF maps

Week 2

- Created a basic wireframe in figma for the UI
- Made UI changes for the same
- Had client meet to finalize the required keys in the log files

Week 3-4

- Worked on making the cards, components and the filters in the Frontend
- Created backend database schema to store json values
- Made few get apis to fetch data
- Created upload api to load the log files
- Added JSON parsing
- Made refinements to all the apis

May

Week 1

- Modified front end to add requestID
- Created dynamic filters
- Created more get api for specific requirements
- Fixed some get apis

- Integrated LEEF parsing
- Had to migrate the node code to java spring boot due to change in client requirements
- Made necessary changes to get the apis working in java

Week 2

- Created apis for mapping of filetype and ip configs
- Fixed some apis returning empty values
- Integrated CEF parsing
- Worked on creating 2 CRUD apis
- Fixed duplication issues
- Crated apis and mapping for remote file upload
- Worked on time based filtering

Week 3

- Wrote cron jobs in java to delete old values
- Integrated cron jobs
- Added netmask support for IP mapping

Week 4

- Added userID changes as requested by client
- Created cron jobs for remote file uploads and history viewing
- Simultaneously worked on another project that needed api binding

Week 5

- Fixed database duplication issues
- Modified some apis to get static values
- Added sorting in few apis
- Refactored java code
- Added classifications data as requested by client

June

Week 1-2

- Concluded client's dashboard project
- Fixed some minor issues
- Gave KT to the clients and the team to further add more charts
- Started working on a new project written in Marko js that needs so refactoring
- Migrated Dev database to production for the marko js project

PHOTOS WHILE AT WORK

