CHENNAI INSTITUTE OF TECHNOLOGY

(AUTONOMOUS)

Sarathy Nagar, Kundrathur, Chennai-600069

Approved by AICTE and Affiliated to Anna University, Chennai

INFORMATION TECHNOLOGY

SOFTWARE DEVELOPMENT ENGINEER (SDE) INTERN

A Report on Internship

BY

Dhejan R
22IT022
Information Technology

JULY 2024

CHENNAI INSTITUTE OF TECHNOLOGY CHENNAI-69

Vision of the Institute:

To be an eminent center for Academia, Industry and Research by imparting knowledge, relevant practices and inculcating human values to address global challenges through novelty and sustainability.

Mission of the Institute:

IM1. To create next generation leaders by effective teaching learning methodologies and instill scientific spark in them to meet the global challenges.

IM2. To transform lives through deployment of emerging technology, novelty and sustainability.

IM3. To inculcate human values and ethical principles to cater to the societal needs.

IM4. To contribute towards the research ecosystem by providing a suitable, effective platform for interaction between industry, academia and R & D establishments.

IM5. To nurture incubation centers enabling structured entrepreneurship and start-ups.

DEPARTMENT OF INFORMATION TECHNOLOGY

Vision of the Department:

To be an eminent centre for Academia, Industry and Research by imparting knowledge, relevant practices and inculcating human values to address global challenges through novelty and sustainability.

Mission of the Department:

DM1: To nurture future leaders by adopting innovative teaching methodologies, inspiring a passion for emerging technologies, and equipping students to tackle global challenges effectively.

DM2: To empower students to develop sustainable solutions that enhance quality of life, transforming communities through innovation and technology.

DM3: To instill human values, ethical principles, and professionalism in students, preparing them to contribute meaningfully to society and uphold ethical standards in the industry

DM4: To strengthen the research ecosystem by promoting collaboration among academia, industry, and R&D establishments, enabling impactful research and technological progress.

DM5: To inspire entrepreneurship by fostering creativity, leadership, and problem-solving skills, enabling students to develop impactful solutions and successful start-ups.

CHENNAI INSTITUTE OF TECHNOLOGY

An Autonomous Institute

CHENNAI-69

CERTIFICATE

This is to certify that the "**Internship Report**" Submitted by **DHEJAN R (REG NO: 22IT022)** is the work done by him/her and submitted during the academic year **2023-2024**, in partial fulfilment of the requirements for the award of the degree of **BACHELOR OF TECHNOLOGY** in **INFORMATION TECHNOLOGY**, at **REVERENCE DATA COMPANY., PVT., LTD.**

Submitted for the End Semester Examination for Internship Held on ……..

Dr. A. R. KAVITHA, M.E., Ph.D.,
Head of the Department

Department Internship Coordinator

Internal Examiner
Date: - …….

External Examiner
Date: -……...

Internship Review Evaluation/Comments

Sl No.	Criterion	Max. Marks	Marks Allotted
1.	Regularity in maintenance of the diary.	10	
2.	Adequacy & quality of information recorded	10	
3.	Drawings, sketches and data recorded	10	
4.	Thought process and recording techniques used	05	
5.	Organization of the Information	05	
6.	Originality of the Internship Report	10	
7.	Adequacy and purposeful write-up of the Internship Report	10	
8.	Organization, format, drawings, sketches, style, language etc. of the Internship Report	10	
9.	Practical applications, relationships with basic theory and concepts	10	
10.	Presentation Skills	20	
Total		100	
Date:			Signature

REVERENCE
DATA COMPANY

No.26/1, Gokulam 3rd Main Road
Kasturibai Nager, Adyar, Chennai – 600020
Tel: 044 – 2445 3322 Telex: 4550 4466
careers@reverencedata.com

INTERNSHIP OFFER LETTER

May 6th, 2024

Dhejan R

Chennai Institute of Technology

Ph: 82480 96345

Dear Dhejan,

Subject: Offer of Internship

We are delighted to offer you an internship position within the Research and Development division at Reverence Data Company. This internship is scheduled to start on 6th May 2024 and is initially set for a duration of two months, ending on 9th July 2024. We value mutual growth and learning opportunities; therefore, the possibility of extending the internship beyond this period exists, contingent upon both the supervisor's assessment and your interest in continuing the engagement.

During your internship, you will be engaged in projects that are crucial to the enhancement of our product offerings. Your key responsibilities will include:

- Developing and refining User Interfaces (UI)
- Enhancing and testing our API integrations
- Contributing to our Data Science initiatives
- Working with Large Language Models (LLMs)
- Developing and refining AI/ML models

You will report directly to Shankar Annadurai, the Product Delivery Head, who will guide your contributions to our projects and ensure a seamless integration into our team dynamics.

Stipend: Your compensation will be based on performance, determined by the deliverables you achieve and your contribution to the projects. Specifics regarding the performance evaluation and stipend calculation will be communicated by your supervisor at the start of your internship.

Sincerely,

Vasanthi. P

Director

Reverence Data Company

ACKNOWLEDGEMENT

First, I would like to thank **Mr. Sankara Subramanian, Lead Technical Architect** of **REVERENCE DATA COMPANY**, **Adyar**, **Chennai** for giving me the opportunity to do an internship within the organization.

I also would like, all the people who worked with me with their patience and openness they created an enjoyable learning environment.

It is indeed with a great sense of pleasure and immense sense of gratitude that I acknowledge the help of these individuals.

I am highly indebted to our Chairman **Shri. P. SRIRAM** and Principal **Dr. A. RAMESH, M.E., Ph.D.**, for the facilities provided to accomplish this internship.

I would like to thank my Head of the Department **Dr. A. R. KAVITHA, M.E., Ph.D.**, for his constructive criticism throughout my internship.

I am extremely great full to my department staff members and friends who helped me in successful completion of this internship.

DHEJAN R
22IT022

PREFACE

I student of Information Technology require to do an Industrial Internship to enhance my knowledge. The purpose of Industrial Internship is to acquaint the students with practical application of theoretical concept taught to me during my internship period.

It was a great opportunity to have close comparison of theoretical concept in practical field. This report may depict deficiencies on my part but still it is an account of my effort.

The output of my analysis is summarised in a shape of Industrial Internship the content of report shows the details of sequence of these. This is my Industrial Internship report which I have prepared for the sake of my Second year Industrial Internship. Being an engineer, I should help the society for inventing something new by utilising my knowledge which can help them to solve their problem so for this I am working in Reverence Data Company.

CONTENT

1. INTRODUCTION

1.1 Internship Overview

During the summer of 2024, I had the opportunity to intern at Reverence Data Company, a cutting-edge organization specializing in advanced data solutions and innovative technologies. My internship spanned from May 6th, 2024, to July 9th, 2024, during which I had the chance to work on several key projects within the company's Research and Development division. This internship was conducted Hybrid at the company's Co-working space, providing me with a wonderful experience to collaborate directly with a diverse team.

1.2 Purpose and Goals

The primary aim of my internship was to gain hands-on experience in areas such as User Interface (UI) development, API integration, Data Science, and the development of AI/ML models. Under the guidance of **Shankar Annadurai**, the Product Delivery Head, I was assigned tasks that were crucial to enhancing Reverence Data Company's product offerings. Additionally, I had the opportunity to learn and work with Snowflake, a powerful data warehousing solution, further expanding my technical skill set.

1.3 Responsibilities

Throughout the internship, my responsibilities included:

- Developing and refining user interfaces to ensure a seamless user experience.
- Enhancing and testing API integrations to improve system interoperability.
- Contributing to data science initiatives by analysing data and developing models.
- Working with large language models (LLMs) to advance the company's AI capabilities.
- Developing and refining AI/ML models to solve complex problems and improve product features.
- Learning and utilizing Snowflake for efficient data management and analysis.

These tasks provided a comprehensive learning experience, allowing me to apply theoretical knowledge to real-world scenarios and develop practical skills in various technological domains.

1.4 Professional Development

The internship was designed to foster professional growth by encouraging active participation in all scheduled meetings and training sessions held at the company's premises. It emphasized the importance of adhering to high standards of quality and professionalism. The experience was further enriched by a performance-based stipend, which motivated me to meet predetermined performance criteria and deliver high-quality work.

1.5 Confidentiality and Ethical Standards

A significant aspect of my internship was understanding and adhering to confidentiality agreements and ethical standards. As outlined in the Non-Disclosure Agreement (NDA) and the Internship Agreement, maintaining the confidentiality of all proprietary information and demonstrating professional integrity were paramount. This not only ensured the protection of Reverence Data's intellectual property but also ingrained in me the importance of ethical behaviour in a professional setting.

1.6 Conclusion

Overall, my internship at Reverence Data Company was a transformative experience that bridged the gap between academic learning and professional application. It provided valuable insights into the practical aspects of UI development, API integration, data science, AI/ML, and Snowflake, enriching my technical knowledge and professional skills. This report details my journey, the projects undertaken, and the knowledge gained during this enriching period.

2. ORGANIZATION INFORMATION

2.1 Reverence Data Company Overview

Reverence Data Company is a next-generation data management platform designed to simplify and streamline data operations for enterprises. It offers a cloud-agnostic framework, which allows businesses to focus on operational expenditures (OpEx) rather than capital expenditures (CapEx). The platform facilitates seamless data sharing across business functions, enhancing data stewardship and governance. With a low cost of ownership and rapid time-to-market capabilities, Reverence Data Company aims to improve operational efficiency and support the quick onboarding of new data sources and target systems.

2.2 About the Company

Reverence Data Company specializes in providing comprehensive data management solutions that cater to both startups and large enterprises. The company's flagship product, Data Goggles, is designed to handle complex data integration and management tasks. Key features include deep observability for operational efficiency, business taxonomy integration for better governance, and a focus on self-service to reduce customer service requirements. Reverence Data Company is headquartered in Lewes, DE, USA, and serves clients across various industries, helping them manage and leverage their data effectively.

Figure 2.2.1

3. INTERNSHIP DESCRIPTION (SDE):

3.1 Software Development Engineer Intern

As a Software Development Engineer Intern at Reverence Data Company, I had the opportunity to contribute to several innovative projects within the Research and Development division. My key responsibilities and contributions included a variety of technical and collaborative tasks, which are detailed below.

3.2 Data Integration and Management

One of the primary projects I worked on was Data Goggles, a cloud-agnostic data management platform. This platform is designed to manage complex Extract, Transform, Load (ETL) workflows, ensure data quality, and handle business metadata. My contributions included:

- **Creating and Managing ETL Workflows**: I developed and optimized ETL processes to ensure efficient data movement and transformation. This involved designing workflows that could handle large volumes of data from various sources, including databases, APIs, and flat files.
- **Ensuring Data Quality**: I implemented data validation and cleansing procedures to maintain high data quality. This included writing scripts and using tools to detect and correct errors in the data, ensuring that it was accurate, complete, and consistent.
- **Managing Business Metadata**: I worked on managing metadata associated with business data, which involved cataloguing data assets, defining data lineage, and ensuring proper documentation. This helped in providing context and meaning to the data, making it easier for users to understand and utilize.
- **Integrating Various Data Sources**: I integrated multiple data sources into the Data Goggles platform, enabling seamless data ingestion and processing. This included setting up connectors and pipelines for databases, cloud storage, and third-party services.
- **Providing End-to-End Traceability**: I implemented mechanisms to track data flow from source to destination, ensuring transparency and traceability. This involved creating audit logs and reports that documented the movement and transformation of data throughout its lifecycle.

3.3 API Enhancements

I was also responsible for enhancing and testing API integrations to facilitate seamless data exchange across multiple platforms. This included:

- **Implementing Custom Transformation Logics**: I wrote custom scripts and functions to transform data as it moved between systems. This included data mapping, aggregation, and formatting to ensure compatibility and usability.

- **Ensuring Effective Pipeline Monitoring**: I set up monitoring and alerting mechanisms to track the performance and health of data pipelines. This included creating dashboards and alerts that provided real-time visibility into data flows, helping to detect and resolve issues promptly.
- **Supporting Seamless Data Exchange**: I worked on creating and maintaining APIs that enabled smooth data exchange between different systems and applications. This included designing RESTful endpoints, ensuring secure data transfer, and maintaining documentation.

3.4 Snowflake Cloud Platform

During my internship, I had the opportunity to learn and work with Snowflake, a powerful data warehousing solution. This experience included:

- **Data Management and Analysis**: I learned how to use Snowflake for efficient data storage, management, and analysis. This included creating and managing databases, schemas, tables, and views.
- **Optimizing Query Performance**: I gained experience in optimizing SQL queries for performance, understanding how to leverage Snowflake's unique architecture for fast and efficient data retrieval.
- **Implementing Security and Access Controls**: I worked on setting up security measures and access controls in Snowflake to protect sensitive data. This included defining roles, permissions, and user authentication mechanisms.
- **Automating Data Pipelines**: I developed and automated data pipelines using Snowflake, enabling seamless data ingestion, processing, and reporting. This included using Snowflake's capabilities for data transformation and integration with other tools and platforms.

3.5 Professional Development

The internship was designed to foster professional growth by encouraging active participation in all scheduled meetings and training sessions held at the company's premises. It emphasized the importance of adhering to high standards of quality and professionalism. The experience was further enriched by a performance-based stipend, which motivated me to meet predetermined performance criteria and deliver high-quality work.

3.6 Confidentiality and Ethical Standards

A significant aspect of my internship was understanding and adhering to confidentiality agreements and ethical standards. As outlined in the Non-Disclosure Agreement (NDA) and the Internship Agreement, maintaining the confidentiality of all proprietary information and demonstrating professional integrity were paramount. This not only ensured the protection of Reverence

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Overall, my internship at Reverence Data Company was a transformative experience that bridged the gap between academic learning and professional application. It provided valuable insights into the practical aspects of UI development, API integration, data science, AI/ML, and Snowflake, enriching my technical knowledge and professional skills. This report details my journey, the projects undertaken, and the knowledge gained during this enriching period.

For more information about the features and projects at Reverence Data, please visit their https://www.reverencedata.com/features.

4. TOOLS LEARNED

- **Angular 18** ***(Frontend)***

Angular is a platform and framework for building single-page client applications using HTML and TypeScript. Angular 18 provides a robust environment for developing dynamic web applications with a component-based architecture. It includes features like data binding, dependency injection, and a comprehensive suite of developer tools.

Figure 4.1

- **PostgreSQL** ***(Database)***

PostgreSQL is a powerful, open-source object-relational database system. It provides strong data integrity, support for complex queries, and extensibility. PostgreSQL is known for its advanced features like Multi-Version Concurrency Control (MVCC), support for JSON and XML, and extensive indexing capabilities.

Figure 4.2

- **Python – Flask** ***(Backend)***

Flask is a micro web framework written in Python. It is lightweight and modular, making it easy to scale up and add more functionality as needed. Flask is commonly used for building RESTful APIs and web applications due to its simplicity and flexibility.

Figure 4.3

- **Jira** ***(Project Tracking)***

Jira is a project management tool developed by Atlassian. It is widely used for tracking issues, bugs, and project progress. Jira supports Agile methodologies, enabling teams to manage sprints, backlogs, and user stories effectively.

Figure 4.4

- **Bitbucket *(Git Repository Management)***

Bitbucket is a Git repository management solution designed for professional teams. It offers source code collaboration, continuous integration/continuous deployment (CI/CD), and seamless integration with other Atlassian products like Jira. Bitbucket supports both Git and Mercurial version control systems.

Figure 4.5

- **Snowflake *(Cloud Based Storage Warehouse)***

Snowflake is a cloud-based data warehousing solution. It provides a scalable and performant platform for data storage, processing, and analytics. Snowflake's architecture separates compute and storage, enabling independent scaling and cost efficiency. It supports structured and semi-structured data formats.

Figure 4.6

- **Figma *(UI Designing)***

Figma is a collaborative interface design tool. It enables designers to create, prototype, and share interactive designs with team members in real time. Figma supports vector graphics editing, design systems, and seamless integration with other design tools.

Figure 4.7

- **Git**

Git is a distributed version control system. It allows multiple developers to work on a project simultaneously by tracking changes in source code and facilitating collaboration. Git provides features like branching, merging, and version history, ensuring efficient code management.

Figure 4.8

- **TypeScript**

TypeScript is a statically typed superset of JavaScript. It adds optional static types to JavaScript, enabling developers to catch errors early during development. TypeScript enhances code readability and maintainability by providing features like interfaces, Enums, and type annotations.

Figure 4.9

- **Sassy Cascading Style Sheets (SCSS)**

Sassy CSS (SCSS) is a preprocessor scripting language that extends CSS. It allows for variables, nested rules, and mixins, which help in writing more maintainable and reusable CSS code. SCSS files are compiled into standard CSS before deployment.

Figure 4.10

- **Confluence**

Confluence is a collaborative workspace developed by Atlassian. It is designed to help teams organize their work, create and share documents, and collaborate on projects in real time. Confluence supports a variety of content types, including text, images, tables, and embedded files, making it a versatile tool for documentation and knowledge sharing. With features like version history, permissions management, and integration with other Atlassian products like Jira and Bitbucket, Confluence provides a seamless and efficient environment for project collaboration and information management.

Figure 4.11

5. BENEFITS OF TECHNOLOGY

5.1 Benefits of Technology in Data Goggles

- **Efficiency and Scalability**
  - **Cloud-Agnostic**: Flexibility to use various cloud services, reducing vendor lock-in and enhancing adaptability.
  - **Scalable Architecture**: Ability to scale compute and storage resources independently, ensuring cost-effective performance management.

- **Data Quality and Governance**
  - **Enhanced Data Quality**: Robust ETL processes and data validation ensure high-quality, reliable data.
  - **Comprehensive Governance**: Metadata management and data lineage tracking support regulatory compliance and data governance.

- **Operational Transparency**
  - **End-to-End Traceability**: Detailed tracking of data flows from source to destination, providing transparency and accountability.
  - **Real-Time Monitoring**: Pipeline monitoring tools ensure that data processes are running smoothly, with quick issue detection and resolution.

- **Cost Efficiency**
  - **Optimized Resource Use**: Cloud-native features and independent scaling reduce costs while maintaining high performance.
  - **Reduced Maintenance**: Automated data processes and self-service features lower the need for extensive support and maintenance.

By working on the Data Goggles project, I gained valuable experience in cutting-edge data management technologies and contributed to the development of a robust, efficient platform that enhances data operations for enterprises.

6. WEEKLY OVERVIEW OF INTERNSHIP ACTIVITIES

	Date	Day	Work done
1st Week	05-05-24	Sunday	***INTERVIEW PROCESS***
	06-05-24	Monday	Interview Selection Mail
	07-05-24	Tuesday	Introduction to the Company
	08-05-24	Wednesday	Getting used to the Tools used in the Company
	09-05-24	Thursday	Meeting with the Lead Architect and Onboarding to the Project
	10-05-24	Friday	Assigned Tasks and responsibilities
	11-05-24	Saturday	Initial Deployment and setting up the Repositories

	Date	Day	Work done
2nd Week	12-05-24	Sunday	Analysed and learned the Project's code structure and getting into the project
	13-05-24	Monday	Designed the Page and components in the Figma (UI)
	14-05-24	Tuesday	Designed the Page and components in the Figma (UI)
	15-05-24	Wednesday	Designed the Page and components in the Figma (UI – Made Refinements on review with the Lead Architect)
	16-05-24	Thursday	Getting into the Codebase and the project. Implemented Angular framework for Frontend Development
	17-05-24	Friday	Getting into the Codebase and the project. Implemented python Flask repository for backend Development
	18-05-24	Saturday	Understanding the project requirements and started to Create components and work on the codebase

	Date	Day	Work done
3rd Week	19-05-24	Sunday	Understanding the project requirements and started to Create components and work on the codebase
	20-05-24	Monday	Working in the Codebase. Implementing the UI design into the Website (Frontend) Angular.
	21-05-24	Tuesday	Working in the Codebase. Implementing the UI design into the Website (Frontend) Angular.
	22-05-24	Wednesday	Working in the Codebase. Implementing the UI design into the Website (Frontend) Angular.
	23-05-24	Thursday	Working in the Codebase. Implementing the UI design into the Website (Frontend) Angular.
	24-05-24	Friday	Working in the Codebase. Implementing the UI design into the Website (Frontend) Angular.
	25-05-24	Saturday	Had Review with the Technical Lead for improvised Design of static Frontend Website

	Date	Day	Work done
4th Week	26-05-24	Sunday	*--WEEK OFF--*
	27-05-24	Monday	*--WEEK OFF--*
	28-05-24	Tuesday	Started to step in the Backend codebase and established functions for the Backend and frontend routing
	29-05-24	Wednesday	Working in the Backend codebase and established functions for the Backend and frontend routing
	30-05-24	Thursday	Written the SQL Queries for the required data to be fetched from the Database with the Backend to frontend
	31-05-24	Friday	Written the SQL Queries for the required data to be fetched from the Database with the Backend to frontend
	01-06-24	Saturday	Written API endpoints along with the SQL queries to get implemented in the backend written functions

	Date	Day	Work done
5th Week	02-06-24	Sunday	Written API endpoints along with the SQL queries to get implemented in the backend written functions
	03-06-24	Monday	Written API endpoints along with the SQL queries to get implemented in the backend written functions
	04-06-24	Tuesday	Had review for the Work done and improvised the codebase based on the suggestion and refinements given by the Chief Technical lead
	05-06-24	Wednesday	Tried to fetch the Backend data to the frontend
	06-06-24	Thursday	Tried to fetch the Backend data to the frontend
	07-06-24	Friday	Had review for the Work done and improvised the codebase based on the suggestion and refinements given by the Chief Technical lead
	08-06-24	Saturday	*--WEEK OFF--*

	Date	Day	Work done
6th Week	09-06-24	Sunday	Created Jira Sprint and structured the work. Project tracking and sub-tasks were created.
	10-06-24	Monday	Had a meeting with Project Analyst and the Chief Executive Officer
	11-06-24	Tuesday	Designed the Page and components in the Figma (UI)
	12-06-24	Wednesday	Designed the Page and components in the Figma (UI)
	13-06-24	Thursday	Working in the Codebase. Implementing the UI design into the Website (Frontend) Angular.
	14-06-24	Friday	Working in the Codebase. Implementing the UI design into the Website (Frontend) Angular.

	15-06-24	Saturday	Working in the Codebase. Implementing the UI design into the Website (Frontend) Angular.

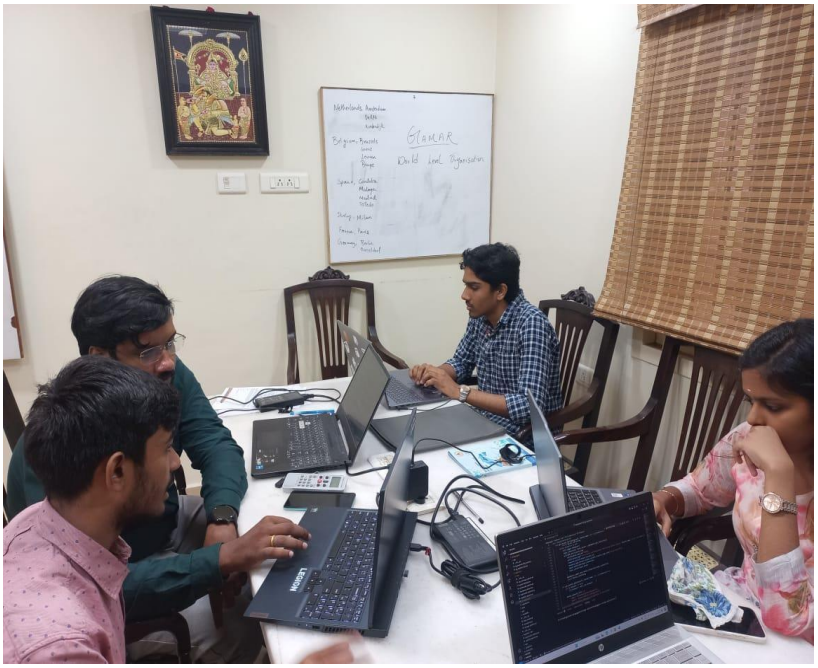
	Date	Day	Work done
7th Week	16-06-24	Sunday	Step in the Backend codebase and established functions for the Backend and frontend routing
	17-06-24	Monday	Working in the Backend codebase and written functions for the Backend and frontend routing
	18-06-24	Tuesday	Written the SQL Queries for the required data to be fetched from the Database with the Backend to frontend
	19-06-24	Wednesday	Written the SQL Queries for the required data to be fetched from the Database with the Backend to frontend
	20-06-24	Thursday	Written API endpoints along with the SQL queries to get implemented in the backend written functions
	21-06-24	Friday	Written API endpoints along with the SQL queries to get implemented in the backend written functions
	22-06-24	Saturday	Written API endpoints along with the SQL queries to get implemented in the backend written functions

	Date	Day	Work done
8th Week	23-06-24	Sunday	--*WEEK OFF*--
	24-06-24	Monday	Working in the Backend codebase and written functions for the Backend and frontend routing
	25-06-24	Tuesday	Working in the Backend codebase and written functions for the Backend
	26-06-24	Wednesday	Working in the Backend codebase and written functions for the Backend
	27-06-24	Thursday	Working in the Backend codebase and written functions for the Backend
	28-06-24	Friday	Working in the Backend codebase and written functions for the Backend
	29-06-24	Saturday	--*WEEK OFF*--

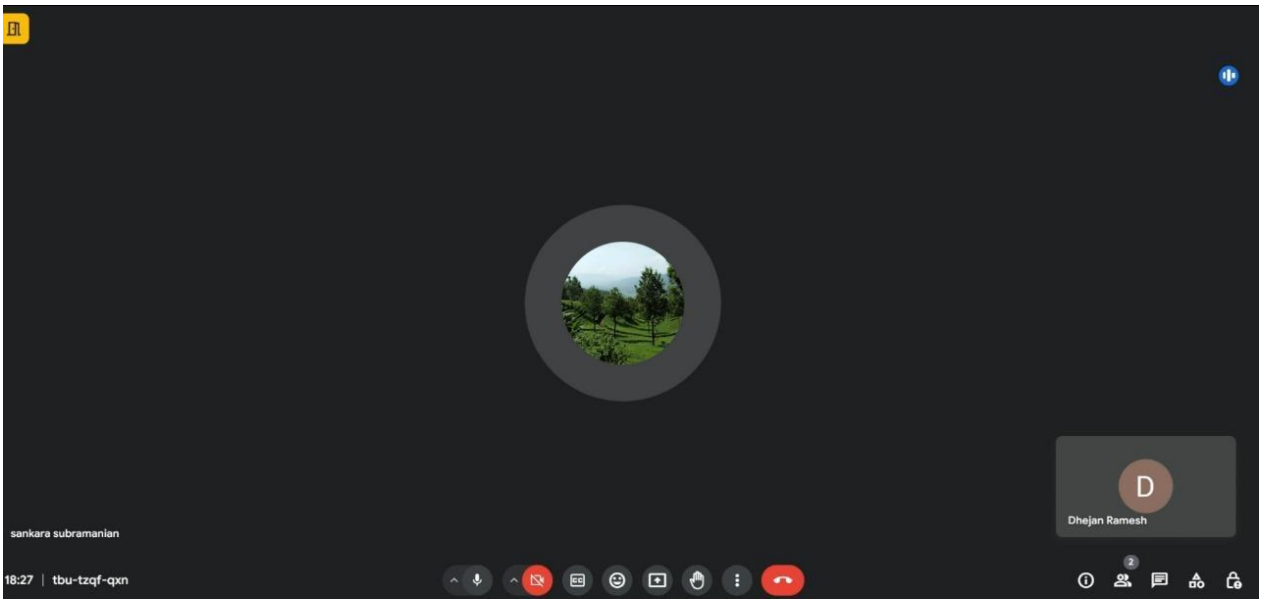
	Date	Day	Work done
9th Week	30-06-24	Sunday	Integrated the Backend and Populated the data along with the UI refinements. The Data is fetched from the SQL Queries written at the Backend
	01-07-24	Monday	--*WEEK OFF*--
	02-07-24	Tuesday	Created the Data Objects for the Materialistic views necessary.

7. INTERNSHIP PHOTOS

7.1 Working at Office



7.2 Meetings with the Lead Technical Architect



7.3 Product Screenshots

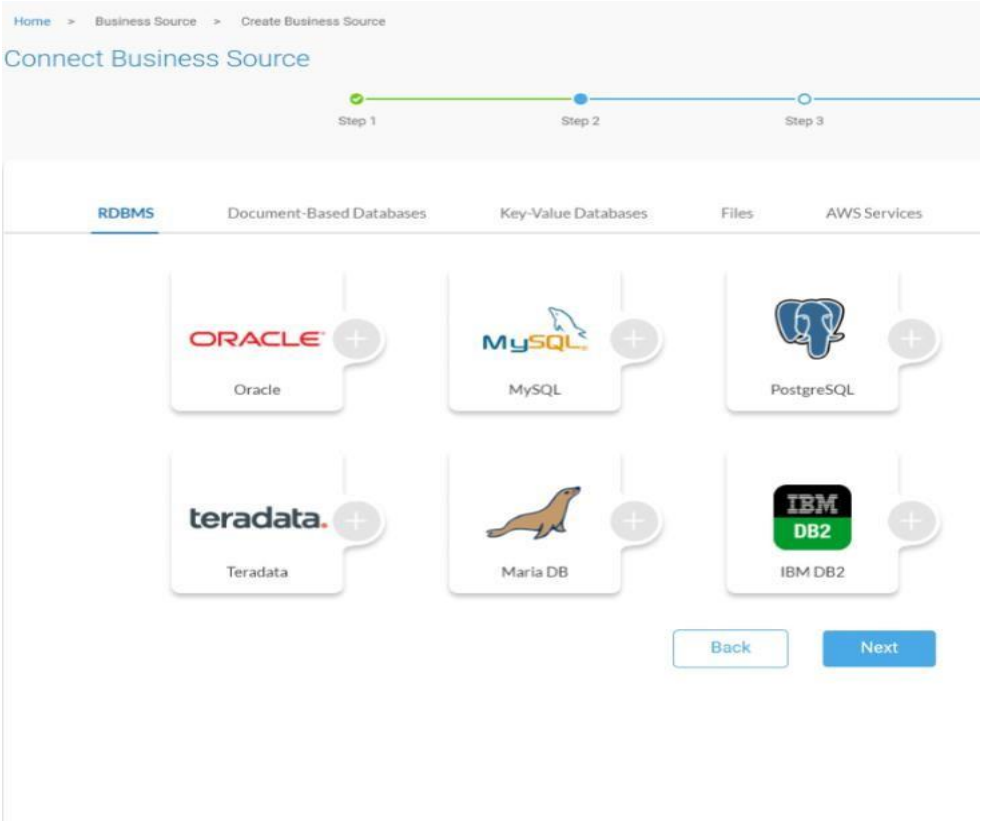


Figure 7.3.1

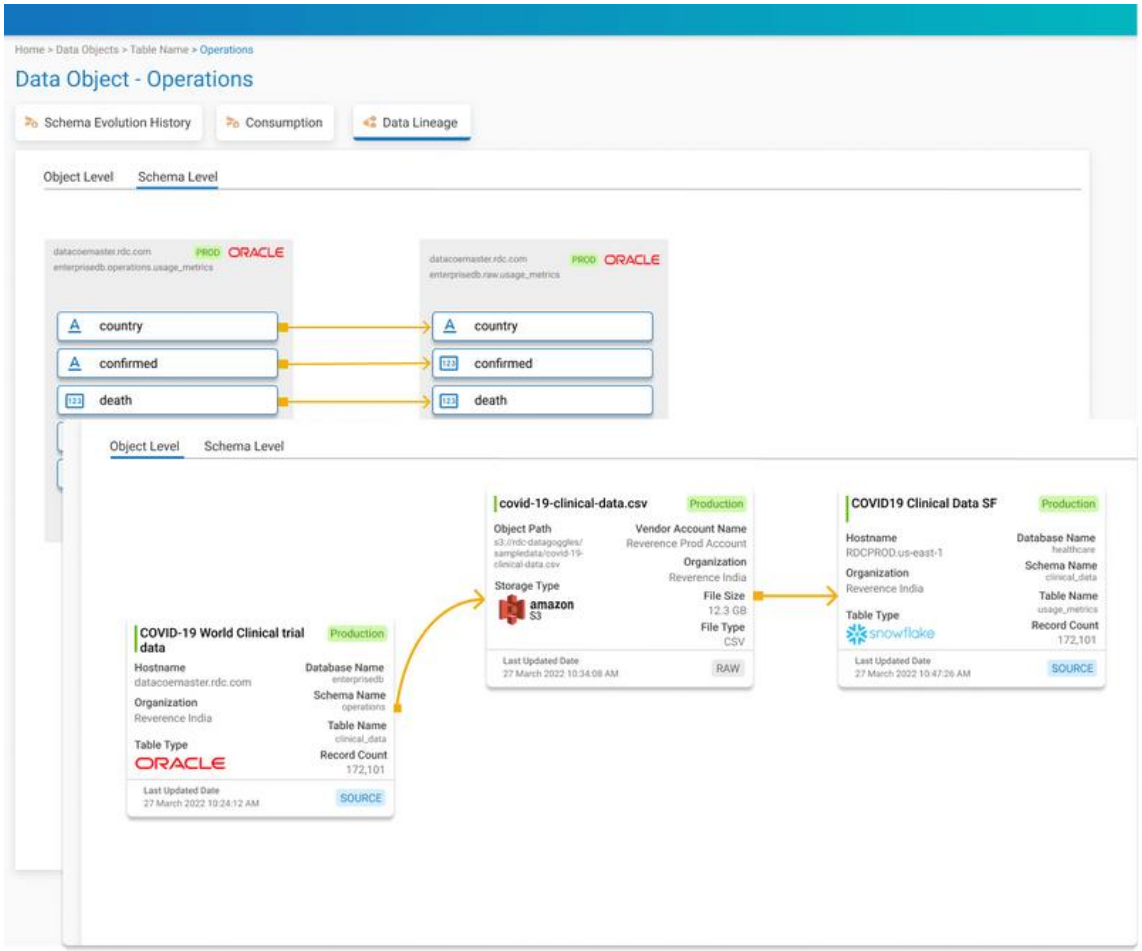


Figure 7.3.2

8. PO & PSO Attainment

PO. No	Graduate Attribute	Attained	Justification
PO 1	**Engineering knowledge**	Yes	The Engineering Knowledge has been successfully gained.
PO 2	**Problem analysis**	Yes	Analysis is done on current problem or opportunity
PO 3	**Design/Development of solutions**	Yes	A Website was developed based on the given problem and source
PO 4	**Conduct investigations of complex problems**	Yes	Investigations were done on the problems options that people wanted.
PO 5	**Modern Tool usage**	Yes	Snowflake, Angular, Typescript etc. are some of the modern technologies used.
PO 6	**The Engineer and society**	Yes	The solution is made to help the society.
PO 7	**Environment and Sustainability**	Yes	This could include using ecofriendly packaging, optimizing delivery routes for fuel efficiency, or sourcing ingredients from sustainable suppliers
PO 8	**Ethics**	Yes	This could involve ensuring fair labour practices, treating customers and employees with respect, and promoting transparency in your business operations.
PO 9	**Individual and team work**	Yes	This could involve individual contributions to the codebase, collaboration with others during the development process, and effective communication within the team.
PO 10	**Communication**	Yes	This could involve clear and concise user interfaces, effective error handling, and timely notifications to users regarding their orders or any updates

PO. No	Graduate Attribute	Attained	Justification
PO 11	**Project management and finance**	Yes	This could include features such as order tracking, payment processing, and managing the overall project timeline and budget.
PO 12	**Life-long learning**	Yes	This could involve keeping up with the latest technologies and best practices in software development, incorporating user feedback to improve the app, and striving for personal and professional growth.

PSO. No	Graduate Attribute	Attained	Justification
PSO 1	To analyze, design and develop solutions by applying the concepts of Robotics for societal and industrial needs.	No	Application of concepts of robotics are not yet given.
PSO 2	To create innovative ideas and solutions for real time problems in Manufacturing sector by adapting the automation tools and technologies.	No	Innovative ideas and solutions for real time problems in Manufacturing sector by adapting the automation tools and technologies are not done.

9. INTERNSHIP OUTCOME

My internship at Reverence Data Company provided a multifaceted experience that significantly enhanced my technical skills, professional growth, and industry knowledge. The primary focus of my work was on the Data Goggles project, which allowed me to delve deep into various aspects of data management, integration, and analytics.

9.1 Technical Skills Development

Working on the Data Goggles project honed my abilities in several key areas:

- **ETL Processes**: I developed and optimized complex ETL workflows, ensuring efficient data movement and high data quality.
- **Data Integration**: I integrated diverse data sources into a cohesive system, providing end-to-end data traceability and improving data accessibility.
- **API Development**: I enhanced API functionalities, implementing custom transformations and monitoring systems to ensure seamless data exchange.
- **Snowflake Utilization**: I gained proficiency in using Snowflake for scalable and efficient data warehousing, optimizing performance and data management.

9.2 Professional Growth

The internship provided a structured environment for professional development:

- **Collaboration**: I worked closely with a diverse team, enhancing my communication and teamwork skills. This experience emphasized the importance of collaboration in achieving project goals.
- **Problem-Solving**: I encountered and resolved various technical challenges, which improved my problem-solving abilities and adaptability.
- **Project Management**: By managing tasks and deadlines effectively, I developed a keen sense of project management and time management skills.

9.3 Industry Knowledge

The internship offered valuable insights into the data management industry:

- **Best Practices**: I learned industry best practices for data governance, quality assurance, and system integration.

- **Cutting-Edge Technologies**: Exposure to advanced tools and technologies such as Snowflake, Angular, and Figma broadened my technical horizon and prepared me for future industry trends.

9.4 Key Achievements

- **Enhanced Data Operations**: Contributed to improving the efficiency and reliability of data operations within the Data Goggles platform.
- **Quality and Governance**: Implemented robust data quality checks and governance frameworks, ensuring data integrity and compliance.
- **User Empowerment**: Developed self-service tools that empowered users to manage and utilize data effectively, reducing dependency on technical support.

9.5 Personal Growth

This internship also contributed to my personal development:

- **Confidence**: Successfully handling responsibilities and overcoming challenges boosted my confidence in my technical and professional capabilities.
- **Networking**: Building relationships with professionals in the field provided me with a valuable network for future opportunities and collaborations.

In conclusion**,** my internship at Reverence Data Company was an enriching experience that bridged the gap between academic learning and real-world application. It equipped me with practical skills, industry knowledge, and professional growth, setting a solid foundation for my future career in data management and software development.

10. CONCLUSION

My internship at Reverence Data Company has been an invaluable learning experience that significantly contributed to both my professional and personal growth. Through my involvement in the Data Goggles project, I gained hands-on experience in data integration, ETL processes, API development, and the use of advanced tools like Snowflake. This opportunity allowed me to apply theoretical knowledge to real-world scenarios, enhancing my technical proficiency and problem-solving skills.

Working within a dynamic and collaborative environment provided me with a deeper understanding of industry best practices and emerging technologies. The support and guidance from my mentor and colleagues were instrumental in my development, helping me navigate complex challenges and achieve project milestones.

The professional skills I acquired, including effective communication, teamwork, and project management, have prepared me for future roles in the tech industry. Additionally, this internship reinforced the importance of data governance, quality assurance, and the value of data-driven decision-making in modern businesses.

In conclusion, my time at Reverence Data Company has been transformative, equipping me with the necessary skills and confidence to pursue a successful career in data management and software development. The knowledge and experiences gained will undoubtedly serve as a strong foundation for my future endeavours.

INTERNSHIP COMPLETION CERTIFICATE

REVERENCE
DATA COMPANY

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careers@reverencedata.com

INTERNSHIP COMPLETION LETTER

July 2nd, 2024

Dhejan R

Chennai Institute of Technology

Ph: 82480 96345

Dear Dhejan,

Subject: Successful Completion of Internship

I am pleased to congratulate you on the successful completion of your internship at Reverence Data Company. Your dedication and hard work during the internship period from 6th May 2024 to 9th July 2024 have been truly commendable.

You have made significant contributions to our Research and Development division, particularly in enhancing user interfaces, API integrations, and advancing our Data Science and AI/ML initiatives.

We appreciate your professionalism, enthusiasm, and commitment to excellence. Working under the guidance of Shankar Annadurai, our Product Delivery Head, you demonstrated the ability to integrate seamlessly into our team and contribute meaningfully to our goals.

We are confident that the experience and skills you have gained during this internship will serve you well in your future endeavours. Congratulations on your successful internship completion. We wish you all the best in your academic and professional pursuits.

Sincerely,

Vasanthi. P

Director

Reverence Data Company