



## SHORT-TERM INTERNSHIP



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## Acknowledgements

I would sincerely like to thank APSCHE for providing me with this short - term immersion Internship which helped me gain practical experience and knowledge on data analytics.

I thank our respected principal Sir Dr. C.S.K Chakravarthy for giving me this wonderful opportunity.

I would also like to thank our head of the department Department of BSC, and our guide for being a wonderful mentor throughout my project.

I thank Almighty God, my parents and my friends without whose help this project would not have been completed.

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**This page content gives an idea only, which topics have to write.**

## **1: EXECUTIVE SUMMARY**

The internship report shall have a brief executive summary. It shall include five or more Learning Objectives and Outcomes achieved, a brief description of the sector of business and intern organization and summary of all the activities done by the intern during the period.

## **2: OVERVIEW OF THE ORGANIZATION**

### **Suggestive contents**

- A Introduction of the Organization
- B Vision, Mission, and Values of the Organization
- C Policy of the Organization, in relation to the intern role
- D Organizational Structure
- E Roles and responsibilities of the employees in which the intern is placed.
- F Performance of the Organization in terms of turnover, profits, market reach and market value.
- G Future Plans of the Organization.

## **3: INTERNSHIP PART**

*Description of the Activities/Responsibilities in the Intern Organization during Internship, which shall include - details of working conditions, weekly work schedule, equipment used, and tasks performed. This part could end by reflecting on what kind of skills the intern acquired.*

## Chapter -1 :- Executive Summary

### Learning objectives:-

- + Learned how to obtain, clean / process and transform data.
- + Learned how to use appropriate models of analysis, access of the quality of input.
- + Learned how to apply Computing theory, language and algorithms as well as mathematical statistics models to formulate and use data analysis.
- + Learned how to perform well in group.
- + Learned how to interpret data findings efficiently to any audience visually and in written formats.

### Learning outcomes:-

- + Developing relevant programming abilities.
- + Abilities to build and access data based models.
- + Able to create some visualizations.

### Brief Description about Smart Bridge:-

"Smart Bridge" is an ed-tech organization with a vision to bridge the gap between academic and industry.

### Activities:-

I have done some activities during my internship such as gathering, cleaning and organizing the data for given Superstore Dataset in IBM Cognos Analytics.

## Chapter 2:- Over-view of the organization

- A. "Smart Internz" is an Ed-Tech organization with a vision to bridge the gap between Academic and Industry experiential learning programs on Emerging Technologies (IoT, AI, ML, Data Science, Robotics) are building skilled entry
- B. "Smart Internz" is in mission to build technology Committees in academic to encourage students towards Innovations since inception they trained thousands of students and faculty.
- C. "Smart Internz" restrict access to interns, who are not restricted in APSCHE-LMS they want to maintain a respectful environment for everyone.
- D. "Smart Internz" organisation almost trained 7 lacs plus students, 3 lacs Interns and they have done 2000+ projects.
- E. Roles of the Employees are to assist and Contribute to the team.
- F. It Employees many and has a good performance in terms of market value.
- G. In a mission to build technology Communities in Academic to encourage students towards innovation & entrepreneurship.

## Chapter-3: Internship part

Internships are valuable way to gain newfound knowledge: this internship is a university-provided Internship. It is a paid Internship. This Internship are structured and with a 'learning Agenda'. All potential Interns must and should attended to every class so that they can learn new things. this is the main agenda of the small interning organization.

### Skills:-

- # Data cleaning and preparation
- # Data Analysis techniques
- # Data Visualization
- # creating visualization Dashboard
- # Creating visualization report.
- # creating story telling
- # Best practices
- # Data literacy
- # modifying Templates

## CHAPTER 8: OUTCOMES DESCRIPTION

Describe the work environment you have experienced (in terms of people interactions, facilities available and maintenance, clarity of job roles, protocols, procedures, processes, discipline, time management, harmonious relationships, socialization, mutual support and teamwork, motivation, space and ventilation, etc.)

### Description of work environment:-

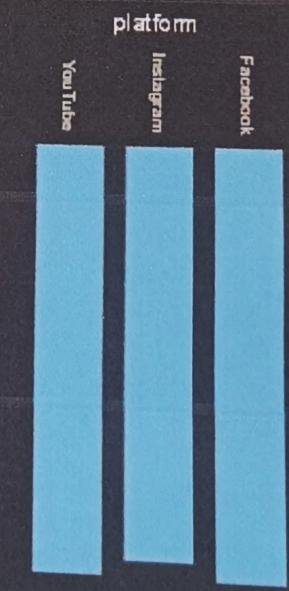
The internship at Smart Bridge has been a transformative experience, equipping me with practical skills in data - Analytics and a deep understanding of the role of IBM Cognos Analytics in the industry. The hands on experience & exposure to real world projects has not only sharpened my technical abilities but has also honed my communication skills and project management skills, the work environment fostered a collaborative atmosphere with clear task - roles, well-defined protocols & structured procedures. The facilities were equipped with clear task - roles ,well defined protocols necessary tools for data analysis . Team members exhibited mutual support & teamwork , Contributing to a harmonious relationship . Overall, the internship provided a comprehensive experience in data - Analytics within a well-organised and supportive work environment .

# MAXIMUM DATA ABOUT THE SOCIAL MEDIA USED BY USERS

time spending on platform by the profession

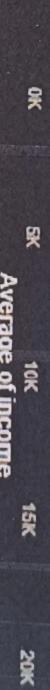


max of income by platform



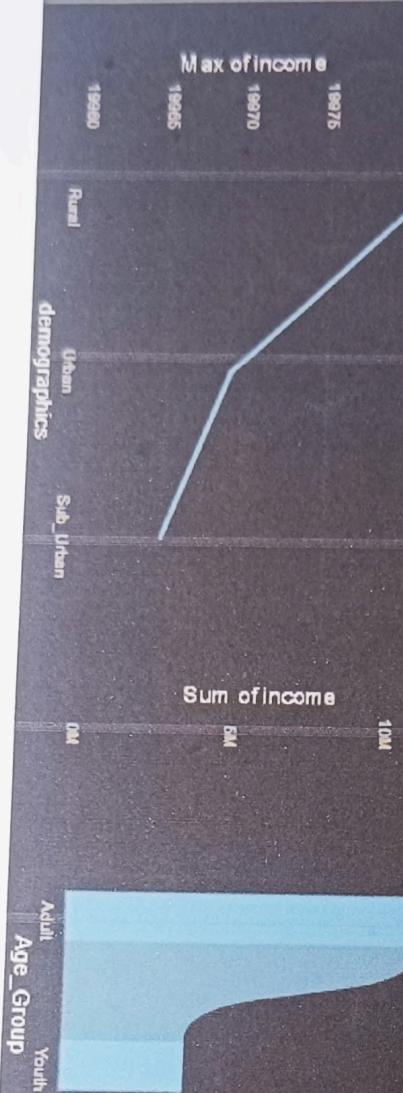
Sum of income by Age\_Group

average of age by profession



Max of income by demographics

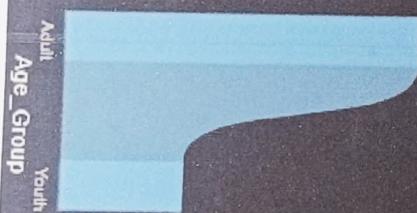
Variance of time\_spent



Sum of income

10M 5M 0M

19960 19970 19965



# Social pulse

## REPORT:

### maximum of income by demographics



The rural demographic has the highest maximum income

The maximum income earned by individuals in urban demographic : 19969

The maximum income earned by rural is greater then urban demographic

Adult income is 2.9 times higher than youth income

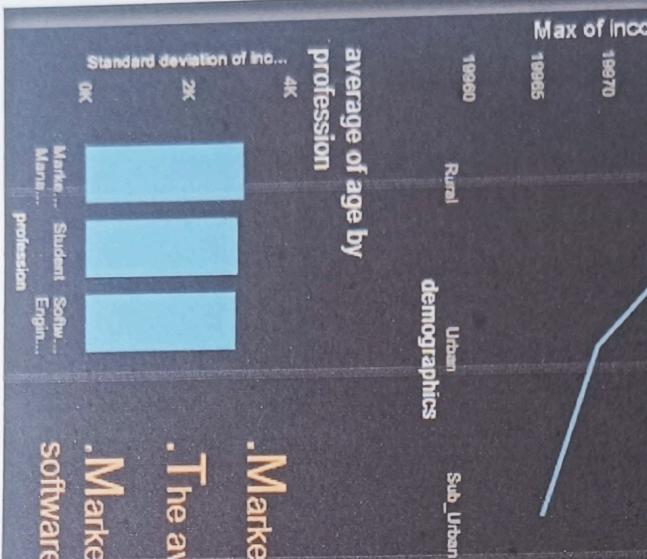
Youth age group earns a less income level comparing to adult age group

The total income represents the combined earnings of both adult and youth

.Marketer manager gain income more than student and software engineer

.The average income across these professions is : 2965.08

.Marketer manager earn the most, closely followed by student and software engineer



**ACTIVITY LOG FOR THE FIRST WEEK**

| <b>Day &amp; Date</b> | <b>Brief description of the daily activity</b>             | <b>Learning Outcome</b>                            | <b>Person In-Charge Signature</b> |
|-----------------------|--|--|-----------------------------------|
| Day - 1               | Started Smart Interning Data - Analytics Course            | Learned about Current Business                     |                                   |
| Day - 2               | Attended to live session with positive enthusiasm attitude | Learned about over - view of Business Intelligence |                                   |
| Day - 3               | Attended to live sessions to learn new Concepts            | Learned about over - view of Data Analytics        |                                   |
| Day - 4               | Logged into the zoom live session                          | Learned about over - view of data visualization    |                                   |
| Day - 5               | Learn how to Create an IBM Cognos Account                  | Create IBM Cognos account                          |                                   |
| Day - 6               | Revised all the previous class                             | Check the all Covered Concepts.                    |                                   |

WEEK-1(From Dt.03-07-24...to Dt..05-07-24..)

**Objective of the Activity Done:**

Introduction to power BI Data analytics.

**Detailed Report:**

Agenda of data analytics includes, understanding the fundamentals of power BI and the importance of data analytics in business decision making.

Attended an orientation session on the internship objectives and deliverables.

Completed introductory modules on power BI, including its interface key features and capabilities.

Learned about the various types of data sources that can be connected to power BI.

Developed a foundational understanding of power BI.

Connected to different data sources and performed basic data cleaning.

Created a simple report showing basic of the visualizations such as bar charts and line graphs.

Participated in a workshop on basic data cleaning and transformation techniques.

*Second*  
ACTIVITY LOG FOR THE FIRST WEEK

| Day & Date | Brief description of the daily activity           | Learning Outcome                    | Person In-Charge Signature |
|------------|---|-------------------------------------|----------------------------|
| Day - 1    | Registered into IBM Cognos Analytics program      | verified my IBM Cognos account      |                            |
| Day - 2    | Launched the Cognos Analytics Cloud Trail         | Logged into a IBM Cognos account    |                            |
| Day - 3    | overview of the IBM Cognos                        | learnt what is IBM Cognos           |                            |
| Day - 4    | Overview of the IBM Cognos portal                 | Learned about IBM Cognos portal     |                            |
| Day - 5    | Attended to live session with a positive attitude | Learned how IBM Cognos portal work  |                            |
| Day - 6    | Revised all the previous Concept                  | Got clear cut info about IBM portal |                            |

WEEKLY REPORT  
WEEK-2 (From Dt..08-07-24.....to Dt.....12-07-24.....)

Objective of the Activity Done:

Data importing and modeling

Detailed Report:

This week dedicated to mastering data importing and modeling within power BI.

Explored different data Connectors available and the online services.

Learning about the ETL (Extract, Transform, Load) process within power BI.

Practiced data modeling techniques, including creating relationships between tables, using DAX (Data Analysis Expressions) functions and designing Calculated Columns.

Successfully imported datasets from multiple sources into power BI.

Built a robust data model with well-defined relationships.

Used DAX to create Calculated Columns and measures for the Enhanced analysis.

*Third*  
ACTIVITY LOG FOR THE FIRST WEEK

| Day & Date | Brief description of the daily activity        | Learning Outcome   | Person In-Charge Signature |
|------------|--|--|----------------------------|
| Day - 1    | Downloaded Sample Super - Home.xls file        | Learn how to upload the data                               |                            |
| Day - 2    | prepared data for the visualization            | Learned how to <sup>prepare</sup> to <del>save</del> data. |                            |
| Day - 3    | Saved prepared data for Superstore data module | Learned what to save data module.                          |                            |
| Day - 4    | Features of power - BI.                        | Learned what are the features                              |                            |
| Day - 5    | Overview of data exploration                   | Learned about data exploration                             |                            |
| Day - 6    | Revised all the previous Concepts.             | Data Exploration and about power BI.                       |                            |

**WEEKLY REPORT**  
WEEK-3 (From Dt.....15-07-29.....to Dt.....19-07-29.....)

**Objective of the Activity Done:**

Data Visualization techniques

**Detailed Report:**

This week focused on creating effective and interactive data visualization in power BI.

- Studied various visualizations options available in the power BI including advanced charts, maps and also custom visuals.
- participated in a hands-on session to design interactive dashboards with slicers, filters, and drill-throughs.
- Learned best practices for choosing the appropriate of the visualizations for different data types and insights.
- Designed a comprehensive dashboard featuring key of the matrices using a mix of visuals.
- Implemented interactivity through slicers and filters to allow users to explore the data dynamically.
- Presented the dashboard to peers for feedback.

*Fourth*  
ACTIVITY LOG FOR THE FIRST WEEK

| Day & Date | Brief description of the daily activity | Learning Outcome                       | Person In-Charge Signature |
|------------|---|--|----------------------------|
| Day - 1    | Created a bar chart visualization       | Learned how to prepare bar chart       |                            |
| Day - 2    | Created a pie chart visualization       | Learned how to prepare pie chart       |                            |
| Day - 3    | Created a bubble chart visualization    | Learned how to prepare bubble chart    |                            |
| Day - 4    | Created a area chart visualization      | Learned how to prepare area chart      |                            |
| Day - 5    | Created a line chart visualization      | Learned how to prepare line chart      |                            |
| Day - 6    | practised all the visualization.        | Learned how to prepare visualizations. |                            |

**WEEKLY REPORT**

WEEK-4 (From Dt....22-07-24..... To Dt....26-07-24.....)

**Objective of the Activity Done:**

Advanced data Analysis with DAX

**Detailed Report:**

This week dedicated to depending our understanding of DAX for advanced data analysis.

- Completed advanced DAX training modules covering topics such as time intelligence, advanced filtering, and context management.
- Worked on a case study that required creating complex measures to calculate year-over-year growth of with and rolling averages.
- Collaborated with peers to troubleshoot DAX-related which the issues in our data models.
- Developed proficiency in writing complex DAX expressions.
- Applied time intelligence functions to analyze trends over time.
- Improved the accuracy and efficiency of data models using advanced DAX.

Fifth.  
ACTIVITY LOG FOR THE FIRST WEEK

| Day & Date | Brief description of the daily activity       | Learning Outcome                           | Person In-Charge Signature |
|------------|---|--|----------------------------|
| Day - 1    | Created a line and Column chart visualization | Learned how to create line and column      |                            |
| Day - 2    | Created a waterfall visualization             | Learned how to create a waterfall          |                            |
| Day - 3    | Created a Hierarchical bubble chart           | Learned how to create hierarchical bubble. |                            |
| Day - 4    | Created a line chart for fore-casting         | Learned how to create line chart           |                            |
| Day - 5    | Overview of Cognos Dashboards                 | Learned what is power BI dashboard         |                            |
| Day - 6    | Revised and practised all the Concepts        | Learned about more visualizations          |                            |

**WEEKLY REPORT**  
WEEK-5 (From Dt. 29-07-24... To Dt..... 02-08-24.....)

**Objective of the Activity Done:**

Real-world Case Study: Sales Analytics

**Detailed Report:**

This week focused on applying power BI skills to a real-world sales analytics Case Study.

- Received a database set representing sales data from a fictional company.
- Defined key performance indicators (KPIs) such as sales growth, customer acquisition, and product performance.
- Built a sales dashboard to visualize the KPIs and identify trends, outliers, and areas for improvement.
- Created a comprehensive sales dashboard that highlighted crucial business insights.
- Used data story telling techniques to communicate findings effectively.
- Received positive feedback from mentor on the practical application of power BI skills.

Sixth  
ACTIVITY LOG FOR THE FIRST WEEK

| Day & Date | Brief description of the daily activity              | Learning Outcome                 | Person In-Charge Signature |
|------------|--|----------------------------------|----------------------------|
| Day - 1    | Created a dashboard with Data Source Superstore Data | Learned how to Create Dashboard. |                            |
| Day - 2    | modified with some of the parameters                 | Edited Dashboard.                |                            |
| Day - 3    | Created another dashboard with visualization         | Learned how to add visualization |                            |
| Day - 4    | Inserted map chart, Donut chart                      | Learned how to add visualization |                            |
| Day - 5    | Inserted word cloud to the dashboard                 | How to insert visualization.     |                            |
| Day - 6    | Revise and practical all Concepts                    | Learned how to create dashboard  |                            |

**WEEKLY REPORT**  
WEEK-6 (From Dt.....05-08-29..... to Dt.....09-08-29.....)

**Objective of the Activity Done:**

Report optimization and tuning

**Detailed Report:**

This week focused on optimizing the power BI reports for performance and readability.

- Learned about Power BI report optimization techniques, including data reduction, efficient use of DAX, and the query optimization.
- Implemented incremental data refresh to improve report and load times.
- Explored best practices for managing large datasets and reducing memory usage.
- Optimized existing reports to load faster and handle large datasets.
- Applied techniques to reduce the size of data models without losing critical information.

Seventh  
ACTIVITY LOG FOR THE FIRST WEEK

| Day & Date | Brief description of the daily activity  | Learning Outcome               | Person In-Charge Signature |
|------------|--|--------------------------------|----------------------------|
| Day - 1    | Overview of the power-BI report          | Learned about power-BI report  |                            |
| Day - 2    | Presented data in report format          | Learned about presenting data  |                            |
| Day - 3    | Created a report using the visualization | Learned how to create a report |                            |
| Day - 4    | Created another report                   | Learned how to create a report |                            |
| Day - 5    | Created a report using visualization     | Learn how to create report     |                            |
| Day - 6    | Revised and practiced all Concepts.      | Learned report                 |                            |

WEEKLY REPORT

WEEK-7 (From Dt.....12-08-24..... to Dt....16-08-24.....)

Objective of the Activity Done:

Data analysis and project work - visualization

Detailed Report:

This week marked the beginning of the project phase.

- Started by defining the project scope, objectives and deliverables.
- The project involved analyzing a dataset provided by Smart Internz, cleaning and transformation the data, and building a data model.
- Our team focused on identifying key matrices, trends and patterns that could drive business decisions.
- The initial reports and dashboards were created to visualize these insights, using the skills and the existing techniques over the past six weeks.

eighth  
ACTIVITY LOG FOR THE FIRST WEEK

| Day & Date | Brief description of the daily activity | Learning Outcome                     | Person In-Charge Signature |
|------------|---|--------------------------------------|----------------------------|
| Day - 1    | overview of power-BI Story              | Learned about Story                  |                            |
| Day - 2    | Created a Story in portal               | Learned how to Create power-BI Story |                            |
| Day - 3    | Create d a guided Journey story         | Learned about guided journeys story  |                            |
| Day - 4    | Create a slide show story               | Learned how to Create slide show     |                            |
| Day - 5    | Created 6 scenes in Story               | Learned about types of story         |                            |
| Day -6     | Revised and practised all the Concepts  | Learned about Story creation.        |                            |

**WEEKLY REPORT**

WEEK-8 (From Dt.....19-08-21..... to Dt.....23-08-21.....)

**Objective of the Activity Done:**

project work - finalization and presentation.

**Detailed Report:**

In this week, we completed the project by refining our reports and dashboards ensuring they met the project requirements.

- We focused on enhancing the visual appeal and usability of the dashboards by adding interactive elements and ensuring the data was accurately represented.
- The week culminated with a presentation to the Smart Interning team, where we showcased our findings, explained the methodologies used, and demonstrated how the insights could be applied to solve real business problems.
- The project was well received, marking a successful conclusion to the internships.

Describe the real time technical skills you have acquired (in terms of the job-related skills and hands on experience)

### Description of the technical skills acquired

- + Data Analysis:- proficiency in examining and interpreting complex datasets.
- + Statistical Analysis:- understanding and applying statistical methods to derive insights.
- + Data visualization:- mastery in creating compelling visualization for effective communication of data.
- + Analytics tools proficiency:- proficiency with web-based tools like MS Excel, Power BI, Google Colab for analytics & visualization.
- + Programming Languages knowledge & expertise in Python programming language
- + Visualization generation:- skills in developing interactive dashboards, comprehensive reports, narrative stories in Cognos Analytics.
- + Problem Solving:- developing solution to challenges encountered during data analysis.
- + Data Cleaning and Preprocessing:- proficiency in data cleaning & preparing data for analysis.

Describe the managerial skills you have acquired (in terms of planning, leadership, team work, behaviour, workmanship, productive use of time, weekly improvement in competencies, goal setting, decision making, performance analysis, etc.

## Description of the managerial skills Acquired.

- + Project management:- Co-ordinating tasks, setting goals & ensuring the timely completion of the data analytics project.
- + Team Collaboration:- Working efficiently in a group setting, delegating tasks & fostering a collaborative environment.
- + Leadership skills:- Taking initiative, guiding the team & making decisions to achieve project objectives.
- + Time management:- Prioritizing tasks, meeting deadlines, & efficiently allocating resources.
- + Problem Solving as a team:- Addressing challenges collectively & finding solutions through group discussion (&) collaboration.
- + Adaptability:- Being flexible (&) adapting to changes in project scope or requirement.
- + Quality Assurance:- Ensuring the accuracy & quality of the data analytics deliverables produced by the team.
- + Feedback & Improvement:- Providing constructive feedback to team members & actively participating in continuous improvement processes.

Describe how you could improve your communication skills (in terms of improvement in oral communication, written communication, conversational abilities, confidence levels while communicating, anxiety management, understanding others, getting understood by others, extempore speech, ability to articulate the key points, closing the conversation, maintaining niceties and protocols, greeting, thanking and appreciating others, etc.,)

### Description of the Communication Skills Acquired

- Technical Communication:- Efficiently Conveying Complex data analytics Concepts & findings.
- presentation skills:- Creating & delivering engaging presentations to Communicate insights , dashboard , visualizations & projects .
- team Collaboration:- Collaborating with team members to share information , discuss project progress & updates .
- written Communication:- Crafting clear & concise reports , documentation and emails related to data analytics process .
- Conflict Resolution:- Addressing & Resolving Conflicts within the team to maintain a positive & productive environment between team members
- feedback delivery:- providing Constructive feedback to peers , mentors & trainers and receiving feedback ; ; fostering a culture of continuous improvement
- clarity in instructions:- clearly Communicating project tasks , goals & expectations , Roles to every team members .

Describe how could you could enhance your abilities in group discussions, participation in teams, contribution as a team member, leading a team/activity.

Reflecting on my experience in data analytics at Smart bridge interns, I've identified key areas for enhancing my abilities in group discussions, team participation and leadership. To improve my contributions in group discussions, I aim to actively listen to others, ask insightful questions and share my opinions, perspectives clearly & effectively. As a team member, I plan to strengthen collaboration by proactively offering support, leveraging my technical skills and embracing different viewpoints of team members.

Lastly to enhance my leadership capabilities I plan to focus on taking initiative, creating a positive team environment, and efficiently co-ordinating team activities. Through these measures, I am committed to continuous growth and excellence in my role within the team.

Describe the technological developments you have observed and relevant to the subject area of training (focus on digital technologies relevant to your job role)

By integrating data with power-BI we can analyze large set of data easily and can predict the future consequences for any events. It takes a lot of time to analyze data manually but through lot of time to power-BI we can easily sort lot of data within seconds. It is very easy to understand data in visualization such as graphs, Bar diagram, line charts, pie charts, map charts etc.

The power-BI Company was growing fast and expected to expand four times its size by 2030; owing to further advancements in data analytics in the analysis of huge data volumes generated by Connect devices

The future of data analytics looks bright with emerging technologies such as artificial intelligence, machine learning and block chain these technologies have the potential to transform data leading to new insights and discoveries that were previously impossible