



SHORT-TERMINTERNSHIP



**DR. LANKAPALLI BULLAYYA COLLEGE
VISAKHAPATNAM**

Acknowledgements

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chapter 1: Executive summary, description of the section of business Internnongawization.

Smart bridge operates in the data analytics section providing innovating solutions to enhance business intelligence the organization leverages power with actionable insights, enabling data driven decision making.

learning objectives and outcomes.

1. Understand power bi fundamentals.
2. Data modeling
3. proficiency in power bi tools
4. Data Cleaning & transformation.
5. Data visualization.
6. Report Design and sharing.

Summary of Intenship Activities.

1. Attending live training sessions. and practical meeting sessions.
2. Selection of topics - Analysis of ~~election in India~~ medical malpractices and insurance database in United States of America.
3. Team formation and assignment of tasks to team members.
4. Designing Developing interactive dashboards, story, report on project using power BI.
5. Drafting a project video demonstration and preparation of final report.

Chapter - 2 :- overview of the organization:-

Smart Bridge is a platform that offers virtual internship to the students. The platform's ideal is to prepare students for the job market by establishing a cooperative relationship between industry and academic. Smart Bridge partners with companies such as Google to offer virtual internships. The internships provide students with hands-on experiments with the latest technologies and enable project-based learning. Smart Bridge's flagship event is the "summer internship program". The program develops students' skills in emerging technologies. i.e. 1) Artificial Intelligence 2) Machine Learning 3) Internet of Things.

Organization's objective:-

Smart Bridge's main objective is to bridge the existing gaps between prevailing industry standards and what the academics offers to the graduates while passing out of university. Smart Bridge offers suitable skill development and training to the young talent before on boarding their first job. Their skill development programs are designed considering the present in demand skills in the industry.

Therefore the main objective of Smart Bridge is providing internship for every student promote industry approved professional electives become a talent factor of India by 2026.

Chapter 3: Internship Part

Description of the Activities / responsibilities undertaken

- 1) Registering the with APSCHÉ Smart internship enrolling for Smart bridge's data analytics course i.e live training session as per the pre-scheduled training calendar.
- 2) Participating weekly quizes completing weekly assignment respect to data analytics
- 3) Coauthoring Team formation detection of Project topic - "Medical Malpractices and Insurance database in United States of America."
- 4) Coauthoring cleaning of analyzing the excel data sets of the Project topic - "Medicon malpractices and Insurance data base".
- 5) Attending Project - mentoring session and designing and developing interactive dashboard Report on the Project topic using Power BI
- 6) web integration of above Project deliverables with team's webpage using visual Studio code, Drafting a Project video demonstration and Preparation of final report.
- 7) Submission of team Project via uploading the Project files in github Repository of the team.

percentage of the amount by the different age groups

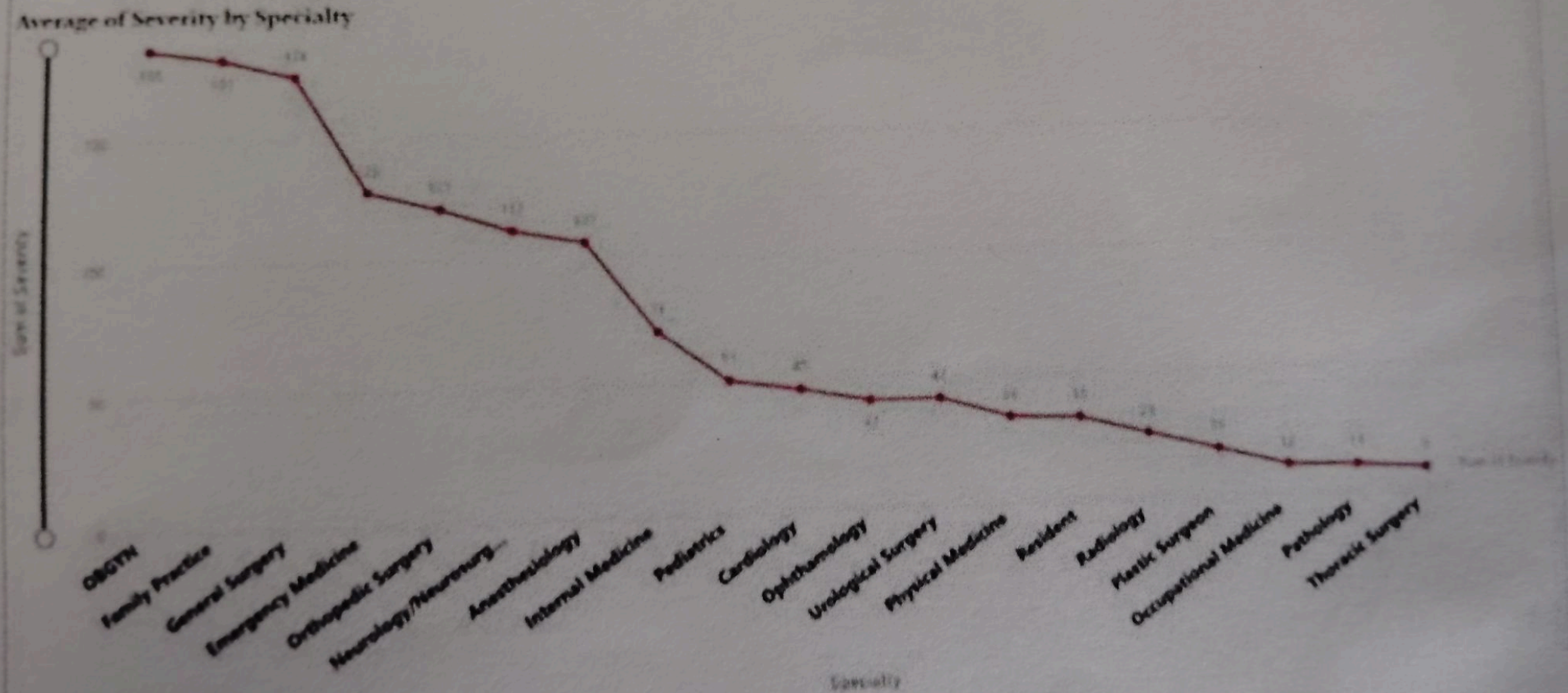
Sum of Amount by Age



comparison of insurance between two different genders

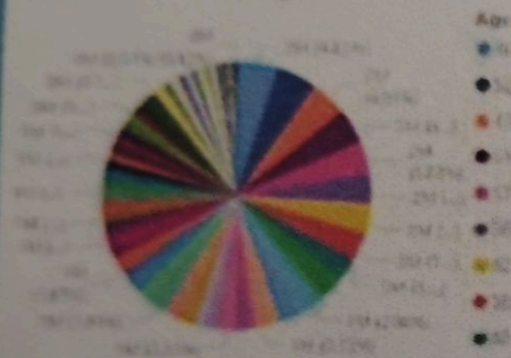


comparison of insurance between two different genders

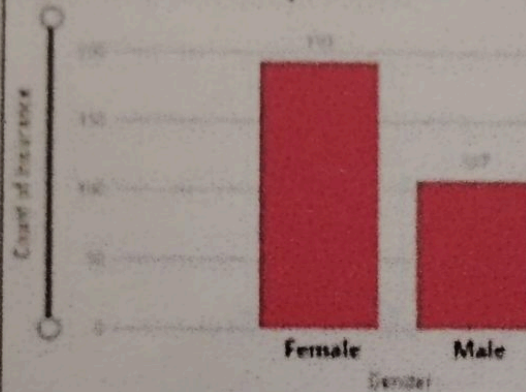


Medical Malpractice : Insurance Database

Sum of Amount by Age



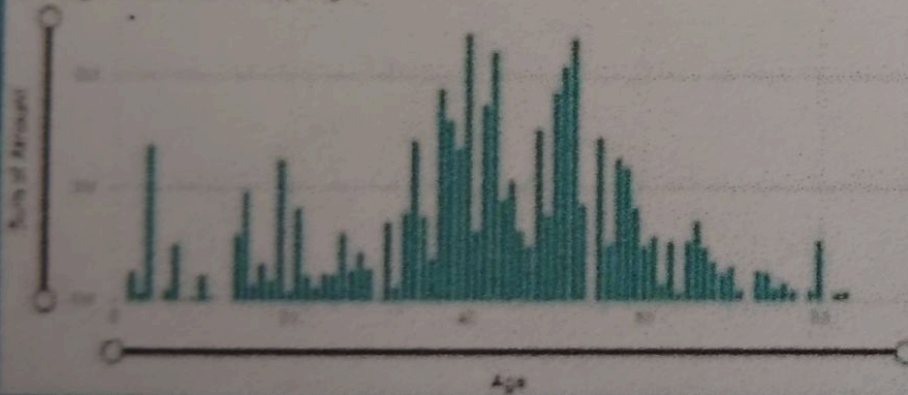
Count of Insurance by Gender



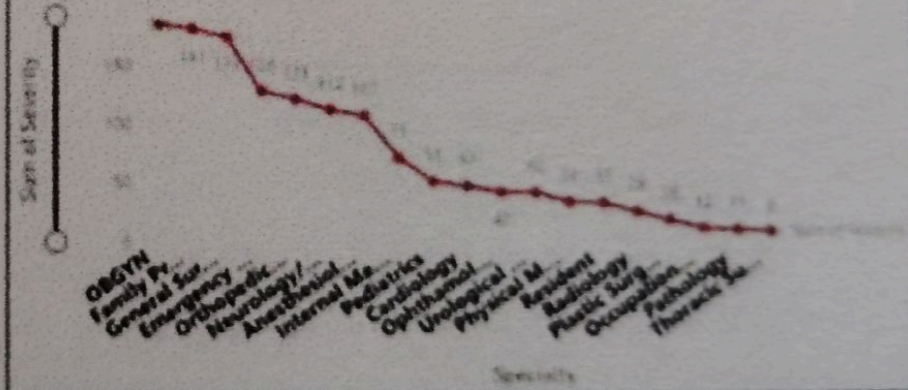
Marital Status by Insurance



average of Amount by Age



Severity by Specialty



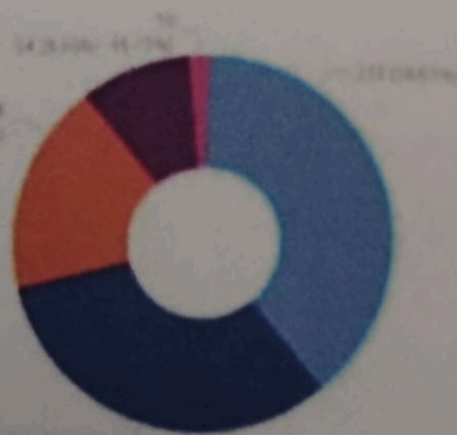
Total claims by marital status and severity rating

STATUS

Single

Married

Marital Status by Insurance

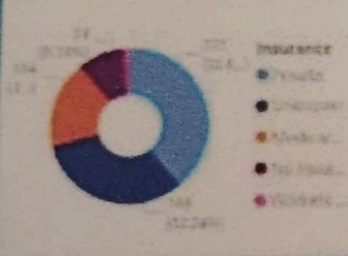


- Insurance
- Private
- Unknown
- Medicare/Medicaid
- Public Insurance
- Workers Compensation

Medical malpractice : Insurance database

Distribution of claim payments by different age groups

Marital Status by Insurance



Marital Status by Insurance. It displays the distribution of marital statuses based on different types of insurance. Here's a breakdown of the data presented in the chart:

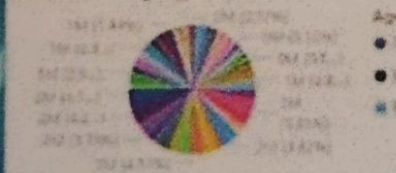
Private Insurance (represented in orange):

Number of people: 223

Percentage: 38.6%

Medicare Insurance (represented in red):

Distribution of claim payment by different age group



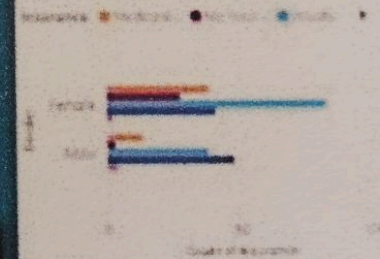
The chart shows claim payments ranging from 1M to 2M. Since there are 10 physicians with equal percentages (10% each), the distribution is relatively even across the age groups. Other slices represent 1M or 2M payments, suggesting more significant contributions.

About dataset

According to a recent study published in the US News and World Report the cost of medical malpractice in the United States is \$65.6 billion a year, which is 2.4 percent of annual health-care spending. Another 2011 study published in the New England Journal of Medicine revealed that annually, during the period 1991 to 2005, 7.4% of all physicians licensed in the US had a malpractice claim. These staggering numbers not only contribute to the high cost of health care, but the size of successful malpractice claims also contributes to high premiums for medical malpractice insurance.

comparison of claim between gender

comparison of claim payment for different genders



Amount - Amount of the claim payment in dollars

Severity - The severity rating of damage to the patient, from 1 (minimal trauma) to 9 (death)

Age - Age of the claimant in years

Private Attorney - Whether the claimant was represented by a private attorney

Marital Status - Marital status of the claimant

Specialty - Specialty of the physician involved in the lawsuit

Diagnosis - Type of medical insurance covered by the patient

Gender - Patient Gender

1. "Female":

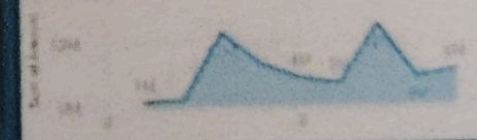
- "Private Insurance" (represented in blue): The longest bar, indicating the highest count among females, suggesting that private insurance is the most common among this gender.

- "Medicare/Medicaid Insurance" (represented in red): A shorter bar, indicating a moderate count of females with this type of insurance.

- "No Insurance" (represented in black): A short bar, suggesting a smaller count of females with no insurance.

Highest claim payment recorded in each severity

highest claim payment recorded in each severity



Date Points:

Severity 1: 1M

Severity 2: 1.2M (Peak)

Severity 3: 7M

Severity 4: 4M

Severity 5: 1.1M (Highest Peak)

Severity 6: 4M

Severity 7: 5M

ACTIVITY LOG FOR THE SECOND WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1 08/07/2024	Features and components of power BI	clear view on every component required	
Day - 2 09/07/24	power BI in action and its architecture	visible insights and sales format	
Day - 3 10/07/24	Power query and transformation operations	clarity about ETC tools	
Day - 4 11/07/24	Tools present in power BI Desktop	clear view on each and every tool present	
Day - 5 12/07/24	Analysing the data in different types	Learned about practicality on data usage	
Day - 6			

Objective of the Activity Done:

Introduction to power BI.

Detailed Report:

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

- Completed introduction session on the internship including this interface models on power BI including this interface, key points and components.
- It developed a fundamental understanding of power BI.
- Connected to different data sources and performed basic data cleaning.
- Created a simple report showcasing basic visualization such as bar charts and line graphs.
- participated in a workshop on basic data cleaning and transformation techniques.
- Attended on sessions on internship objectives and deliverables.

ACTIVITY LOG FOR THE THIRD WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1 15/07/24	Data collection and data cleaning	Learned about the process of in DA	
Day - 2 16/07/24	Differentiated between storyboard, Dashboard and report	Learned the differenced about between contents to represent	
Day - 3 18/07/24	Data structuring and its usage with power BI	Learned the usage of data structure	
Day - 4 19/07/24	Revised on topics as far completed	clear view with the usage of power BI	
Day - 5			
Day - 6			

WEEKLY REPORT
WEEK-2 (From Dt.....to Dt.....)

Objective of the Activity Done:

Detailed Report:

Data Importing and Modeling

This week dedicated to mastering

data importing and modeling with power BI

→ Explored different data connectors available in power BI. Such as Excel, SQL database and online services.

→ learning about the ETL (Extract, Transform + Load) process within power BI.

→ practiced data modeling technique, 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.

→ used to create calculated analysis.

ACTIVITY LOG FOR THE FORTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1 22/07/24	Research the additional information	Additional information about power BI	
Day - 2 23/07/24	Revised about data collection and data cleaning	Learned about starting process in DA	
Day - 3 24/07/24	Revised about the data visualisation	clear view on visualisation part	
Day - 4 25/07/24	DAX and DAX ^p functions	clear view on DAX functions	
Day - 5 26/07/24	All the functions present in power BI	Learned about the functions to apply	
Day - 6			

Objective of the Activity Done:

Data visualization

Detailed Report:

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

- studied various visualization operations available in power BI including advantage of Create, maps, and Custom visuals.
- participated in a hands on session to design interactive dashboards with slicers, filters and drill throughs.
- learned best practices for choosing appropriate visualization for insights.
- implemented interesting through slicers and filters allow users to explore the data dynamically.
- presenting the dashboard to peers for feedback.

ACTIVITY LOG FOR THE FIFTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1 29/07/24	Explained max factors in DAX	learned about expressions and functions in DAX	
Day - 2 30/07/24	Max about filters functions in DAX	clearview on different views	
Day - 3 31/07/24	preparation for grand assessment	Prepared for test	
Day - 4 01/08/24	Preparation for grand assessment	Prepared for test	
Day - 5 02/08/24	Grand assessment test	grand gave the assessment	
Day - 6			

WEEKLY REPORT

WEEK-4 (From Dt. To Dt.)

Objective of the Activity Done:

Advanced data Analysis.

Detailed Report:

This week was dedicated to deep ending our understanding of DAX for advantaged data analysis.

- Completed advantaged DAX learning models covering topics on time intelligence, advanced filtering management.
- worked on a case study that required creating complex measures to calculating.
- Collaborating with power to textbox DAX related visual in our data visuals.
- Developed proficiency in writing complex DAX Expressions.
- Applied time intelligence functions to analyzing trends over time.
- Improved the accuracy and efficiency of data models using advanced DAX.

ACTIVITY LOG FOR THE SIXTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1 05/08/24	Optimising power BI Report	clear view on optimising	
Day - 2 06/08/24	Implementation of incremental data	Learned about DA with huge dataset	
Day - 3 07/08/24	Application in business scales	clear view on real-time applications	
Day - 4 08/08/24	Application of techniques to size data models	Learned about sizing data models	
Day - 5 09/08/24	Learned about users information with reports	clear view on report based data	
Day - 6			

Objective of the Activity Done:

Detailed Report: Real world case study
The fourth week we on apply power BI skills to a real world skills analysis Case Study.

- Received a dashboard representing sales data from a financial company.
- Defined key performance indicators (KPIs) such as sales growth, customer acquisition and product performing acquire performances.
- Created a comprehensive sales dashboards that highlighting crucial business techniques.
- Used data storytelling techniques to communicate findings effectively.
- Received positive feedback from mentors on the practical applications of power BI skills.

ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1 03/07/24	Introduction of data analysis and interpreted data visualization	Analysis of the topic	
Day - 2 04/07/24	Agenda and understanding consumes	clearview of business problem and its solution	
Day - 3 05/07/24	Types of analysis process and download of power BI	clear analysis on DA tools and process regarding it.	
Day - 4			
Day - 5			
Day - 6			

WEEKLY REPORT

WEEK-6 (From Dt..... to Dt.....)

Objective of the Activity Done:

Report optimizing

Detailed Report:

This week focused on optimizing Power BI reports for performance and scalability.

- learned about power BI report optimization techniques including data reduction, efficient use of DAX, and query optimization.

- Implemented incremental data reports to improve load times.

- Explored best practices for managing large dashboards reducing memory usage.

- Optimizing existing reports to load fast on and hand larger dashboard.

- Applied techniques to reduce the size of data models without losing critical information.

ACTIVITY LOG FOR THE FIRST WEEK

7th

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1 12/8/24	formation of team	clear view on team	
Day - 2 13/8/24	project scope and objectives	clear view on project assigned	
Day - 3 14/8/24	Aggregation of public reports	segregation of data analysis	
Day - 4 15/8/24	configured public refreshes	Reviewed set on dataset	
Day - 5 16/8/24	feedback on accessibility with publisher report	clear view on outcome of reports	
Day - 6			

Objective of the Activity Done:

project work. presentation

Detailed Report:

In less week, we completed the project by re-finding our reports and dashboards

→ we focused on enhancing the visual appeal and usability of the dashboards by adding interactive elements and ensuring by adding interesting elements data accurately

→ The week culminated with a presentation to the smart Internz team, where a presentation to the finding, explaining the methodologies and demonstrated how the set business problems.

→ The project was well received, marking a successful conclusion to the Internship.

ACTIVITY LOG FOR THE FIRST WEEK

8th

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1 19/8/24	presenting actionable insights	clear view on pictorial representation	
Day - 2 20/8/24	presenting the dashboard and reports	Representing the final output	
Day - 3 21/8/24	collaborations file uploading	Allocating work to all members in team	
Day - 4 22/8/24	Reviewing on dashboard, report	clear view on work done in DA	
Day - 5 23/8/24	Submission of project	submitted to mentor	
Day - 6			

WEEKLY REPORT

WEEK-8 (From Dt. _____ to Dt. _____)

Objective of the Activity Done: project work -

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 dashboard provided by Smart Intenz, cleaning and transforming the data, and bringing a data model.
- our team focused on identifying key metrics, trends and patterns that could drive business decisions.
- The initial reports and dashboards were created to visualize these insights using the skills and techniques learned over the past six weeks.

CHAPTER 6: 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 sma

-nt bridge has been a transformation Experience, Equipping me with practical skills in data Analysis and a deep understanding of the role of power bi in the Industry. The hands on Experience and 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 further the following atmosphere with procedures, the facilities were equipped with necessary tools for data Support and team work, contributing provided harmonious relationships. Overall in data analytics with in a well organized and supportive work Environment.

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

Description of technical skills acquired.

- Data analysis: performing in Examining and interpreting complex data base.
- Statistical Analysis: understanding and applying statistical methods to derive insights.
- Data visualization: mostly 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 and visualizations
- programming language: knowledge and expertise in python programming language.
- visualization generation: skills in developing interactive Dashboards, comprehensive reports, narrative stories.
- problem solving: - Developing solution to challenges encountered during data 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 management skills acquired:—

- project management:— Coordinating tasks, setting goals and ensuring the timely completion the data analysis.
- Team Collaboration :— working effectively in a group setting delegating tasks, and fostering a collaborative environment.
- leadership skills: Taking initiative, guiding the team, and making decisions to achieve project objectives.
- Time management: prioritizing tasks, meeting deadlines and efficiently allocating resources.
- problem solving as a team: Addressing challenges collectively and finding solutions through group discussions and communications.
- Quality Assurance:— Ensuring the accuracy and quality of the data analysis project deliverables by the team.
- Feedback and Improvement:— providing constructive feedback to team members and actively participating in 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 communication skills.

- **Technical communication:-** Conveying complex data-analytic concepts and findings.
- **Presentation skills:-** Creating and delivering engaging presentation to communicate insights, dashboards, visualization and projects.
- **Team Collaboration:-** Collaborating with team members to share information, discuss project with team members.
- **Feedback Delivery:-** providing constructive feedback to presentation and trainings and receiving feedbacks, fostering a culture of continuous improvement.
- **Clarity in instructions:-** Clearly communicating project tasks, and goals, expectation 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 experiences 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 contribution in group discussions, I am to achieve listen to others, ask insightful questions and share my opinions, perspectives, clearly and effectively. As a team leader and I plan to **strengthen** collaboration through proactively offering support, live again my technical skills and embracing different view points of team members and to enhance my leadership capabilities I environment and effectively team activities through the measures. I am committed to continuous growth and excellence in my role abilities in this 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)

Description of the digital technologies.

→ power BI : power BI (Business Intelligence) tool is used for merging and analyzing data. In Integrating reporting modeling merging analyzing, storages and event management to efficiently organizing data for effective decision making.

→ python: python is a high level interpreted interactive and objected, oriented scripting language, It is used for server side web development, software development, and system scripting, task automation, data analysis and data visualization.

→ Visual Studio Code: - Visual Studio Code AKA VS code is a source editor software development by Microsoft for windows and macOS, It is used for program code editing like debugging, task running and version control code Refactoring.

→ Gatsby Bootstrap: - Gatsby Bootstrap is a free, open source front end development framework for the creation of websites and applications.