

WEEKLY REPORT

WEEK-1 (From Dt. 3/7/24 to Dt. 5/7/24...)

Objective of the Activity Done: Introduction to Power BI, Data Analytics

Detailed Report: Agenda of Data Analytics includes, introduction to data analytics and Business intelligence, Business problem and solution, Power BI in Action, Introduction to Power BI, Power BI Architecture, Data to insights flow in Power BI. Explained about the data analytics, Data Analytics tools and technologies. Explanation of data management and data visualization and the data analytics application. Business Intelligence and its Tools. Types of Business Analytics. Explained how to download Power BI. Explained about differences between Business Analytics and Data Analytics and Introduction to Power BI and Power BI Architecture. Explained how to load data and clean data, Creation of visualization and types of visualization. Power BI visualizes the graphs dashboards and pie charts. It facilitates reports etc.

Objective of the Activity Done:

Data Importing and Modeling

Detailed Report:

- Data modeling is a process of Creating a Conceptual representation of data objects and their relationships between tables by using the primary key.
- Data insights flow in Power BI: Data sources, data view and model view for data modelling.
 - Explored different data Connectors available in PowerBI, such as Excel, SQL databases and Online Services.
 - Learned about the ETL (Extract, Transform, Load) process within Power BI.
 - We learned how to clean, reshape and prepare data using power Query editor.
 - The training Covered essential functions like filtering, merging and appending data sets. Additionally we were introduced to data modelling Concepts such as relationships, Cardinality and data hierarchies.
 - Practiced data modeling techniques, including creating relationships between tables using DAX (Data Analysis Expression) functions and designing Calculated Columns.

Objective of the Activity Done:

Data Visualization using Power BI

Detailed Report:

- Learned about various visualization options available in Power BI, including Power charts, advanced charts, maps and Custom visuals.
- Studied choosing appropriate visualizations for different data types and insights.
- The tools present in the power BI desktop are remove Columns, reduce rows, Sorting, Split Column, group by, replace value, transpose, reverse rows, Count rows, Rename, etc.
- There are two ways for analyzing the data. They are Visualization and Statistical.
- In the third week, the emphasis was on data visualization techniques using Power BI.
- We explored various types of charts, graphs and maps that can be created in Power BI to visualize data insights. We also learned about Customizing visual elements. The sessions included best practices for selecting the right visualizations based on the type of data.

WEEKLY REPORT

WEEK-4 (From Dt. 22/7/24 To Dt. 26/7/24)

Objective of the Activity Done:

Advanced Data Analysis with DAX.

Detailed Report:

- This week was dedicated to deepening 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 and rolling averages.
 - Collaborated with peers to troubleshoot DAX-related 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.

Objective of the Activity Done:

Functions and Power BI Service

Detailed Report:

The functions of Power BI includes All, All NO BLANK Row, Calculate, Filter, Match By, Order by and Calculate table

→ Sales analytics: It provides valuable insights into Customer behavior, Sales performance, and areas where processes can be improved.

→ 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 mentors on the practical application of Power BI skills.

→ Finally the focus of this week was on applying Power BI skills to a real world sales analytics.

Objective of the Activity Done:

Report Optimization and Performance Tuning

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 refresh to improve report load times.
- Explored best practices for managing large data sets and reducing memory usage.
- This session also included case studies showing how companies use Power BI for Business Intelligence, sales analysis, financial reporting and operational efficiency.
- Optimized existing reports to load faster and handle larger data sets.
- Applied techniques to reduce the size of data models without losing critical information.
- Improved the overall performance and user experience of Power BI reports.

WEEKLY REPORT

WEEK-7 (From Dt. 12/8/24 to Dt. 16/8/24)

Objective of the Activity Done:

Assignment of Project work

Detailed Report:

Data Analysis and Visualization.

This week was dedicated to learning how to publish and share Power BI reports with stakeholders.

- We started by defining the project scope, objectives and deliverable.
- The project involved analyzing a dataset provided by Smart Internz, cleaning and transforming the data, building a data model.
- Published reports to the Power BI Service and Configured scheduled refreshes.
- Created and shared an app in Power BI that aggregates multiple reports into a single, easy-to-access package for stakeholders.
- Successfully published reports to the Power BI Service and shared them with the internship team.
- Configured role-based security to control access to sensitive data.
- Received feedback on the accessibility and usability of the published reports.

WEEKLY REPORT

WEEK-8 (From Dt. 19/8/24 to Dt. 23/8/24)

Objective of the Activity Done:

Finalization of Project work

Detailed Report:

Finalization and Presentation.

The final week was focused on Completing a Capstone project and presenting it to the internship supervisors.

→ Worked on a final project that involved analyzing a complex data set and presenting actionable insights to a mock client.

→ Developed a Comprehensive Power BI report that included data exploration, advanced visualizations, and key recommendations.

→ Presented the final report to the internship supervisors, showcasing the skills and knowledge gained throughout the internship.

→ Successfully Completed the Capstone project, demonstrating a strong understanding of data analytics using Power BI.

→ Received positive feedback on the quality of analysis and presentation skills.

→ Concluded the internship with a deeper appreciation for data analytics and Power BI as a business intelligence tool.