

WEEKLY REPORT

WEEK - 1 (From Dt 23-03-24 to Dt 29-03-2024...)

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

Detailed Report: → Data Analytics is the practice of utilizing data, statistical methods and technology to extract meaningful insight and make decisions accordingly.

→ The key components of Data Analytics: Data cleaning, Data analysis, Data visualization and Interpretation.

→ DA Tools are software programs, applications and others that help professionals analyze data sets to provide insights, predictions and decision making information.

→ Power BI visualizes the graphs dashboards and pie charts. It facilitates reports etc. explained about features of Power BI.

→ Power BI components like Data view, Power view, Power queries, desktop, Power BI services etc.

→ The first week was focused on understanding the fundamentals of Power BI and the importance of data analytics in business decision-making. The week concluded with a session on loading and transforming data in Power BI.

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WEEK - 2 (From Dt. 01-07-24 to Dt. 11-07-2024..)

Objective of the Activity Done: Data Importing and Modeling

Detailed Report: → Data modelling is the creating relation-ship 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 Power BI, such as Excel, SQL databases and online services.
- Learned about 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.
- Practised data modeling techniques, including creating relationships between tables using DAX (Data Analysis expressions) functions, and designing calculated columns.

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WEEK - 3 (From Dt. 15-7-24. to Dt. 19-07-2024..)

Objective of the Activity Done: Data Visualizations 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 Power BI desktop are Remove column, Reduce row, sorting, split column, group by, replace value, transpose, reverse row, count row, 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 session

included best practices for selecting the right visualization based on the type of data.

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WEEK - 4 (From Dt 22-07-24. to Dt 26-07-2024.)

Objective of the Activity Done: Advanced Analytics and DAX.

Detailed Report: → DAX - Data Analytics Expressions.

formula expression language used in analysis services like Power BI, Excel.

→ Dax functions: Aggregate function, Text function, Date functions, logical functions, counting function, Information functions.

→ Completed advanced DAX training modules covering topics such as time intelligence, advanced filtering and context management.

→ Improved the accuracy and efficiency of data models using advanced DAX.

→ We learned how to create calculated columns, measures, and custom tables using DAX.

→ The training covered complex DAX functions such as time intelligence, filtering and Aggregation. We also explored advanced analytical techniques like trend analysis, forecasting. The week ended with exercises to build dynamic reports using DAX-driven insights.

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WEEK - 5 (From Dt. 01-03-2024 to Dt. 07-03-2024)

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 Analysts Received a dataset 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.
- We learned how to publish reports to the Power BI service, share Dashboards and collaborate with team members in real-time.
- Finally the focus of this week was on applying Power BI skills to a real-world sales analytics case study.

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WEEK - 6 (From Dt. 05-08-24 to Dt. 09-08-2024.)

Objective of the Activity Done: Report Optimization and Performance Tuning

Detailed Report: → Explored best practices for managing large datasets and reducing memory usage.

→ Learned about Power BI report optimization techniques, including data reduction, efficient use of data using DAX and query optimization.

→ Implemented the overall performance and user experience of Power BI reports.

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

→ The session also included case studies showcasing how companies use Power BI for business intelligence, sales analysis, financial reporting and operational efficiency. The week focused on optimizing Power BI reports for performance and scalability. The week wrapped up with an overview of the upcoming project work.

WEEKLY REPORT

WEEK - 7 (From Dt. 12-08-24 to Dt. 16-08-2024..)

Objective of the Activity Done: Assignment of Project work.

Detailed Report: Data Analysis and Visualization.

The seventh week marked the beginning of the project phase.

- we started by defining the project scope, objectives, and deliverables.
- The project involved analyzing a dataset provided by Smart Internz, cleaning and transforming the data, building a data model.
- Our team focused on identifying the 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.

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WEEK - 8 (From Dt. ~~19-08-24~~ to Dt. ~~23-08-2024~~.)

Objective of the Activity Done: Finalization of Project work.

Detailed Report: Finalization and Presentation.

- In the final 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 Internz 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 internship.
- Concluded internship with a deeper appreciation for data analytics and Power BI as a business Intelligence tool.