

Objective of the Activity Done: Introduction to power BI and data Analytics - CS

Detailed Report: → Data Analytics is the practice of utilization

data, statistical methods and technology to extract meaningful insight and make decision accordingly.

→ TO create about data collection, data cleaning, data analysis, data visualization, Interpretation, and business analytics.

→ Power BI visualizes the graph dashboards and pie charts.

It facilitates reports etc. Explain about features of power BI.

→ The explanation of bar chart, column chart and scatter plot.

Agenda: → Introduction to data analytics and business Intelligence.

→ Business problem and solution

→ power BI in action

→ Introduction to power BI

→ Data to insight flow in power BI.

→ Power BI Architecture.

→ Power BI components like data view, power views, power queries, desktop, power BI services etc.

Objective of the Activity Done: Data Importing and modeling.

Detailed Report: →

Data modelling is the creating relationship between tables by using the primary key.

→ Explored different data connectors available in Power BI, such as Excel, SQL databases and online services.

→ We learned how to clean, reshape and prepare data by 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 relationship between tables using DAX (Data Analysis expression) function, and designing the data and calculated the columns and rows data.

→ We learned about ETL (Extract, transform, load) process within the Power BI.

→ We learned the dimensional and measures, Dimensional - categorical, string characters measures and numerical values.

Objective of the Activity Done: Data visualization using power BI

Detailed Report: → learned about the data visualization options available in power BI.

→ They including all the maps, charts, advanced charts and custom visuals.

→ The tools present in power BI desktop are Remove columns, Reduce rows, Sorting, split columns, graph by, data types, Refresh preview, Replace value, transpose, Reverse rows, Count rows, select the data type, Rename, fill, move, format and Rename etc.

→ In these third week, the emphasis was on data visualization techniques using power BI.

→ we explored the various different types of chart created in power BI. to visualize data insights. we learned about customizing visual elements. the sessions included in the best practices for selecting the right visualizations based on the type of data.

→ There are two ways for analyze the data.

1) visualization

2) Statistically

→ visualization means that graphical representations of the data.

Objective of the Activity Done: Advanced Data Analysis with DAX

Detailed Report:

- This week we were dedicated to deepening our understanding of DAX for advanced data analysis.
- DAX course is a training program to help individuals improve the skills in using this DAX.
 - DAX for advanced data modeling, analysis and visualization.
 - DAX (Data Analytics Expression)
 - the formula expression language used in analysis services of power BI Excel.
 - we learned how to create calculated columns, measure, and custom table using DAX
 - 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.
 - Applied time intelligence function to analyze trends over time.
 - DAX function was text function, date function, logical function, counting function and information function.

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, sides by and calculate table.

→ Power BI is a collection of software services, apps and connectors that work together to help you create, share, and consume business insight in the way that serves you and your business most effectively.

→ 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.

→ we also explored power BI integration with other microsoft tools like excel, teams, and share points, making it easier to collaborate.

→ created a comprehensive sales dashboard that highlighted crucial business insight.

→ 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: project completion and report optimization

Detailed Report: →

In this week focused on project completion and Report optimization on power BI reports for performance and scalability.

→ Explored best practices for managing large data sets and reducing memory usage.

→ we included the use of power BI for Business Intelligence, sales analysis, financial reporting and operational efficiency.

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

→ It's improved that overall performance and user experience of power BI reports.

→ we learned about power BI reports optimization techniques, included data reduction, efficient use of DAX and query optimization.

→ In the final week of internship classes, we focused on best practices in the data analytics and real-world application key strategies for optimizing data models, enhancing report performance and maintaining data governance.

Objective of the Activity Done: Assignment of Project work.

Detailed Report:

Data Analysis and Visualization.

- The seventh week was dedicated to learning how to publish and share power BI reports with stakeholders.
- The explored different power BI services option, and including workspaces, sharing and security setting.
- 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 services and configured scheduled refreshes.
- The initial report and dashboard were created to visualize these insights, using the skills and techniques.
- Successfully published report power BI 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.

- > In the final week, we completed the project by refining our reports and dashboard.
- > we 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.
- > we use methodologies and demonstrated how the insights could be applied to solve real business problem.
- > developed a comprehensive power BI report that included data exploration, advanced visualizations and key recommendations.
- > successfully completed the capstone project, demonstrating a strong understanding of data analytics using power BI.
- > concluded the internship on the quality of appreciation for data analytics and power BI as a business intelligence tool.