

Objective of the Activity Done: Introduction to power BI & Data Analytics.

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 dashboard & pie charts. It facilitates reports etc. explain about features of power BI.

→ The explanation of bar chart, Column chart & 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 studio, power views, power queries, desktop, power BI services etc.

Objective of the Activity Done:

Detailed Report: Data Importing and modeling.

- Data modeling is the cleaning 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.
  - practiced 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:

Detailed Report:

- Data Visualization using power BI.
- 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 rows, columns, reduce rows, sorting, split columns, group by, Data types, refresh preview, replace value, transpose, reverse rows, Count rows, select the data type, rename, fill, move, format & Rename.
  - 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 analytics 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 cloud.
  - 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 analysis trends over time.
  - DAX function was text function, Date function, logical function, Counting function and Information function.

Objective of the Activity Done:

Detailed Report:

- Functions & power BI Service.
- The functions of power BI includes All, All NO BLANK ROW, calculate, filter, match by, order 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:

Detailed Report:

Project Completion & Report optimization

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

- Exported 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 & power BI reports.
- we learned about power BI reports optimization techniques, included data reduction, efficient use of DAX & query optimization.
- In the final week of internship class, we focused on best practices in the data analytics and real world application & strategies for optimizing data models, enhancing report performance & maintaining data governance.

Objective of the Activity Done:

Detailed Report:

project work - data analysis & 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 and building 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.

Objective of the Activity Done:

Finalization and presentation.

Detailed Report:

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.