Objective of the Activity Done: Introduction to PowerBi, Data Analytics

Detailed Report:

Agenda of data analytics includes understanding the fundamentals of Power BI and the Importance of data analytics in business decision-making.

• Attended on orientation session on the internship objectives and deliverables.

• completed introductory, key features, and capabilities

• Learned about the various types of data sources that can be connected to Power BI.

• It developed a foundational understanding of Power BI.

• connected to different data sources. basic visualizations such as bar charts and line graphs.

• Participated in a workshop on basic data cleaning and transformation techniques.

Objective of the Activity Done:

Data Importing and modeling

Detailed Report:

This week dedicated to mastering data importing and modeling within Power BI

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

- Learning about the ETL (Extract, Transform, Load) process within Power BI

- Practised data modeling techniques, including creating relationships between tables, using DAX (Data Analysis Expressions), Functions, and designing calculated columns.

- Successfully imported datasets from multiple sources into power BI.

- Build a robust data model with well-defined relationships.

- Used DAX to create calculated columns and measures for enhanced analysis.

Objective of the Activity Done:

Data visualization Techniques

Detailed Report:

This is week focused on creating effective and interactive data visualization in Power BI.

- Studied various visualizations options available in Power BI, including advanced charts, maps, and custom visuals.

- Participated in a hands on session design interactive dashboards, with slicers, filters, and drill - throughs.

- Learned best practices for choosing approxiate visualizations for different data types and insights.

- Designed a comprehensive dashboards featuring key metrics using a mix of visuals.

- Implemented interactivity through slicers and filters to allow users to explore the data dynamically.

- Presented the dashboards to peers to feedback.

Objective of the Activity Done:

Advanced data analysis with DAX

Detailed Report:

This week was dedicated to derending 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 troublesshoot DAX - related issues in our data models.

• Developed, proffency in writing complex DAX expressions.

• Applied time intelligence functions to analyze trends over time.

• Impressed Improved the accuracy and effciency of data models using advanced DAX.

Objective of the Activity Done:

Real-world case study: Sales Analysis

Detailed Report:

The focus this week was on applying Power BI skills to a real-world sales analytics case study.

- Received a dataset representing sales data from a fictional company.

- Defined key performance indicates such as sales growth, customer acquisition and product performance.

- Built a sales dashboard to visualize the KDIs and identify trends, outliners and areas for improvement.

- Created a comprehensive sales dashboards 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.

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 increment data refresh to improve report load times.

- Explored best practices for managing large datasets and reducing memory useage.

- Optimized existing reports to load faster and handle longer datasets.

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

Objective of the Activity Done:

Project work - Data Analysis and Visu-alization

Detailed Report:

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 dash-boards 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 demonstarted how the insights could be applied to solve real business Problems. The Project was well received, marking a sucessful Conclusion to the internship.