

WEEKLY REPORT

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

Objective of the Activity Done:

Detailed Report:

Introduction to Data Analytics and Power BI.

In the first week, we were introduced to the fundamentals of data analytics, emphasizing the role of data-driven decision making in modern businesses. Attended an orientation session on the internship objectives and deliverables. Completed introductory modules on power BI, including its interface, key features, and capabilities.

The sessions covered the basics of data analysis, different type of data, Important of data Visualization. we are explored power BI.

Understanding its interface, learned about the various types of data sources that can be connected to power BI. and how it integrates with other Microsoft products. Connected to different data sources and performed basic data cleaning. participated in a workshop on basic data cleaning and transformation techniques.

Objective of the Activity Done:

Detailed Report:

Data Transformation and Modeling

This second week focused on data transformation and explored different data connectors available in power BI. Such as Excel, SQL database, and online services. we learned how to clean, reshape, and prepare data using power Query Editor. and learned about the ETL (Extract, Transform, load) process within power BI. The training covered essential function like filtering merging, and appending datasets. Process within power BI.

Practiced data modeling techniques, including creating relationship between tables, using DAX (Data Analysis Expressions) functions, and designing calculated columns.

Successfully imported datasets from multiple sources into power BI. Used DAX to create calculated columns and measures for enhanced analysis. The practical sessions helped reinforce these concepts by allowing us to create and manage data models effectively.

Objective of the Activity Done:

Detailed Report:

Data Visualization Techniques

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.

Participated in a hand-on session to design interactive dashboard with slicers, filters, and drill-throughs. We also learned about customizing visual element, using themes and enhancing reports with interactive features like slicers and drill-throughs.

Learned best practices for choosing appropriate visualizations for different data type and insights.

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

WEEKLY REPORT

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

Objective of the Activity Done:

Detailed Report:

Advanced Analytics and DAX

In week four delved into advanced analytics and data analysis expressions (DAX) in Power BI. 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, and what-if scenarios. The week ended with exercises to build dynamic reports using DAX - Driven Insights

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.

Objective of the Activity Done:

Detailed Report:

Power BI Service and Collaboration

The fifth week covered the power BI service and its collaboration features. We learned how to publish report to the power BI service, share dashboards, and collaborate with team members in real-time. 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.

We also explored Power BI's integration with other Microsoft tools like Excel, Teams, and SharePoint, making it easier to collaborate and share insights across the organizations.

Objective of the Activity Done:

Detailed Report: Best practices and Industry.

In the final week of Internship classes, we focused on best practices in data analytics and real-world application key strategies for optimizing data models, enhancing report performance, and maintaining data governance. Learned about power BI report optimization techniques, including data reduction, efficient use of DAX, and query optimization.

Explored best practices for managing large datasets and reducing memory usage. We discussed key strategies for optimizing data models, enhancing report performance, and maintaining data governance.

The week sessions also included case studies showcasing how companies use power BI for business intelligence, sales analysis, financial reporting, and operational efficiency.

Objective of the Activity Done:

Detailed Report:

Project work - Data Analysis and Visualization.

The seventh week marked the beginning of the project phase. We started by defining the project scope, objectives, and deliverable.

We explored different Power BI service features, including workspaces, sharing option, and security setting.

The project involved analyzing a dataset provided by Smart Internz, cleaning and transforming the data, and building a data model. Published reports to the Power BI Service and configured scheduled refreshes.

The final reports and dashboard were created to visualize these insights, using the skills and techniques learned over the past six weeks.

Objective of the Activity Done:

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

The week culminated with a presentation to the Smart Interns team, where we showcased our findings, explained the methodologies used, and demonstrated how the insights could be applied to solve real business problems. 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.