FSDA POWER BI ASSIGNMENT

1. What do you mean by BI? Explain.

Business intelligence includes data analytics and business analytics but uses them only as parts of the whole process. BI helps users draw conclusions from data analysis. Data scientists dig into the specifics of data, using advanced statistics and predictive analytics to discover patterns and forecast future patterns.

Data analytics asks, “Why did this happen and what can happen next?” Business intelligence takes those models and algorithms and breaks the results down into actionable language. According to Gartner's IT glossary, “business analytics includes data mining, predictive analytics, applied analytics, and statistics.” In short, organizations conduct business analytics as part of their larger business intelligence strategy.

BI is designed to answer specific queries and provide at-a-glance analysis for decisions or planning. However, companies can use the processes of analytics to continually improve follow-up questions and iteration. Business analytics shouldn’t be a linear process because answering one question will likely lead to follow-up questions and iteration. Rather, think of the process as a cycle of data access, discovery, exploration, and information sharing. This is called the cycle of analytics, a modern term explaining how businesses use analytics to react to changing questions and expectations.

2. How Power-BI helps in BI, and how does it help Analysts? Explain

Microsoft Power BI is used to find insights within an organization's data. Power BI can help connect disparate data sets, transform and clean the data into a data model and create charts or graphs to provide visuals of the data. All of this can be shared with other Power BI users within the organization.

The data models created from Power BI can be used in several ways for organizations, including telling stories through charts and data visualizations and examining "what if" scenarios within the data. Power BI reports can also answer questions in real time and help with forecasting to make sure departments meet business metrics.

Power BI can also provide executive dashboards for administrators or managers, giving management more insight into how departments are doing.

3.Explain Descriptive analytics

Descriptive Analytics is the examination of data or content, usually manually performed, to answer the question “What happened?” (or What is happening?), characterized by traditional business intelligence (BI) and visualizations such as pie charts, bar charts, line graphs, tables, or generated narratives.

Descriptive analytics is relatively accessible and likely something your organization use daily. Basic statistical software, such as Microsoft Excel or data visualization tools, such as Google Charts and Tableau, can help parse data, identify trends and relationships between variables, and visually display information.

Descriptive analytics is especially useful for communicating change over time and uses trends as a springboard for further analysis to drive decision-making.

4. Explain Predictive analytics

- Predictive analytics uses statistics and modelling techniques to determine future performance.
- Industries and disciplines, such as insurance and marketing, use predictive techniques to make important decisions.
- Predictive models help make weather forecasts, develop video games, translate voice-to-text messages, customer service decisions, and develop investment portfolios.
- People often confuse predictive analytics with machine learning even though the two are different disciplines.
- Types of predictive models include decision trees, regression, and neural networks.

5. Explain perspective analytics

Prescriptive analytics is the process of using data to determine an optimal course of action. By considering all relevant factors, this type of analysis yields recommendations for next steps. Because of this, prescriptive analytics is a valuable tool for data-driven decision-making.

Machine-learning algorithms are often used in prescriptive analytics to parse through large amounts of data faster—and often more efficiently—than humans can. Using “if” and “else” statements, algorithms comb through data and make recommendations based on a specific combination of requirements. For instance, if at least 50 percent of customers in a dataset selected that they were “very unsatisfied” with your customer service team, the algorithm may recommend additional training.

It’s important to note: While algorithms can provide data-informed recommendations, they can’t replace human discernment. Prescriptive analytics is a tool to inform decisions and strategies and should be treated as such. Your judgment is valuable and necessary to provide context and guard rails to algorithmic outputs.

At your company, you can use prescriptive analytics to conduct manual analyses, develop proprietary algorithms, or use third-party analytics tools with built-in algorithms.

6.Write five real-life questions that PowerBi can solve

- How to improve the sales over the next month,quarter,year to increase revenue?
- How to reduce the customer churn rate in order to boost sales of existing products?
- Which Region provided the high sales along with high profit for a particular category?
- What is the predicted profit for the next month,quarter,year for a particular category?
- Which country has the highest Covid-19 deaths for the year 2019?