

IST659\_M001: DATA ADMINISTRATION CONCEPTS AND DATABASE MANAGEMENT

E-Commerce Analytics

# **THE SCHEMA SYNDICATES**

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# Overview of the Project

Our e-Commerce Analytics project revolves around the development and deployment of a comprehensive database system curated for an online retail platform. This database encompasses various tables to manage users, products, orders, payments, and other essential aspects of e-Commerce operations. Leveraging Azure as the deployment platform and Power BI for analytics and insights, this project aims to provide insightful data-driven analyses for strategic decision-making and optimization.

# Why we chose this project

* **Industry Relevance**: Robust data management and analytics are required due to the exponential expansion of online retail and e-Commerce. This project offers a chance to explore a dynamic and quickly changing industry that is in line with the expanding e-Commerce sector.
* **Business Impact:** In the field of e-Commerce, business success is directly impacted by an understanding and analysis of customer behavior and product trends. The goal of streamlining processes and accelerating revenue growth is aligned with this project's emphasis on data-driven decision-making.

# The Business Problems and Projected Solutions/Methodologies

In the vast context of online retail, there are quite a few challenges that an e-commerce organization faces:

* **Customer Engagement and Personalization:** While recognizing and accommodating distinct consumer preferences is vital, it is difficult to create tailored experiences and focused marketing campaigns without strong data analysis.

**Approach:** To gain a thorough understanding of consumer behavior, tastes, and purchase patterns, apply advanced data analytics methods. This involves analyzing user interactions, product views, and purchase histories.

**Resolution:** By gaining insights into customer behavior, the project aims to personalize user experiences.

* **Inventory Management and Product Output Forecasting:** Maximizing sales and minimizing the surplus stock requires effective inventory management, demand forecasting, and product identification.

**Approach:** Apply predictive analytics to examine product performance, predict demand, and discover trends in various categories.

**Resolution:** By ensuring precise and timely delivery, operational data insights enable process optimization, cutting down on errors, expediting order fulfillment times, and improving overall customer happiness.

* **Competitive Edge through Analytics:** Businesses that leverage data analytics get a substantial advantage in a competitive market. Analytical insights influence well-informed decision-making, which affects everything from marketing tactics to product assortment.

**Approach:** Place emphasis on understanding and analyzing customer behavior, preferences, and feedback through comprehensive data analytics.

**Resolution:** With the help of customer-centric analytics, the project seeks to provide highly personalized services, goods, and experiences. By establishing stronger customer relationships and loyalty, it provides a distinct competitive advantage.