

E-commerce Profitability Inventory Optimization

Milestone: Project proposal

Group 23

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Convenience is king in the age of digital technology today. Thanks to electronic commerce, or e-commerce, the internet, which was originally used exclusively for information and networking, has evolved into a humming marketplace. For people all across the world, this phenomenon has made daily life simpler.

E-commerce, which includes both retail and wholesale, is quickly increasing in popularity and is quickly becoming a crucial component of contemporary business. It gives customers a wide range of options, including a variety of brands, sizes, and product groups including electronics and housewares. Customers can easily examine these possibilities and make selections from many vendors through online apps, encouraging healthy competition.

E-commerce stands out for its ability to offer products at various prices to suit all price points, from budget-friendly to upscale. Online purchasing is becoming widely used as a result of this accessibility. As a result, companies are scrambling to build a strong online presence with transactional capabilities to satisfy customers' changing needs.

In conclusion, e-commerce has completely changed how businesses operate by providing unmatched ease and choice. Businesses are adjusting as it grows and using online platforms to meet the ever-changing demands of their clients.

Abstract:

This project focuses on applying data management to enhance many facts about e-commerce online retail operations and data management principles. All four issue statements will be discussed and show how data management and analysis can provide answers and insights.

The major data management that we are considering is the profit that the e-commerce website is earning considering all the product costs, fuel costs, and deliverable costs which will be incurred to deliver the product to the customers.

By analysing past data of e-commerce, which includes product categories, which products are getting sold in high demand, product category performance, customer behaviour with the product he bought, and calculating the profit of the category of a product, Maximizing profit needs Gathering historical data on an e-commerce site that includes sales transactions (i.e., order date, product date, product ID, quantity sold, revenue generated, cost, and product categories)

We are going to compare all the categories and obtain the profit margin among the categories. We are going to compare the reviews obtained for each category

and also find out the category which is in demand and also to indicate which stock to be increased so that the e-commerce could further increase the profit

Purpose:

To effectively manage e-commerce sales and operations through the implementation of data management techniques and processes with an emphasis on profit-maximizing revenue, inventory setup, selection of goods and products, costs, discounts, and reviews.

ER & UML Model:

One of the most often used data models for conceptual data modeling is the entity relationship (ER) model. The ER model features a visually appealing and intuitive notation. As a result, it possesses the perfect qualities for creating conceptual data models. Entity types, attribute types, and relationship types are its three fundamental components.

- Entity type: To a certain group of users, an entity type represents a business notion with a clear meaning. Suppliers, students, products, and employees are a few examples of entity kinds. An entity is a specific instance or occurrence of a certain entity type.
- A property of an entity type is represented by an attribute type.
- An association between two or more entities is represented by a relationship.

A modelling language called the Unified Modelling Language (UML) is useful for specifying, visualizing, creating, and documenting software system artifacts.