**Blinkit Grocery Dataset Analysis**

**Project Highlights**

**1.** **Data Overview**

* The dataset comprises detailed information on sales, product attributes, outlet characteristics, and customer ratings.
* **Entries Analyzed:** 8,523
* **Key Features:**

Item Visibility

Weight

Establishment Year

Sales

**2. Data Cleaning & Preprocessing**

* **Null Values:** The dataset was checked for missing values, and duplicates were removed to ensure data quality.
* **Feature Engineering:**

New features such as **`Establishment Year**` and **`Item Visibility Log**` were created to aid in analysis.

**3. Sales Analysis**

* **Annual Sales Trend**
  + Sales data was analyzed over different establishment years.
  + **Key Insight:** A clear upward trend indicates increasing sales over time, with significant peaks in certain years.
* **Top Selling Items**
  + **Top 10 Products:** These items contribute the most to sales and are crucial for revenue generation.
  + **Bottom 5 Products:** Identified as having the lowest sales, suggesting potential areas for improvement or discontinuation.
* **Most Selling Products by Weight**
  + Products were analyzed based on the quantity sold (measured by weight).
  + **Key Insight:** This helps in understanding product demand beyond just sales value, aiding in better inventory management.

**4. Outlet Performance**

* **Most Preferred Outlet Type**

**Supermarket Type 1:** The most preferred outlet type with the highest customer engagement.

* **Outlet Type with the Highest Sales**

**Supermarket Type 1:** This outlet type also generated the highest sales, indicating its significance in the sales strategy.

* **Sales by Item Type and Outlet Size**

A detailed breakdown showed medium-sized outlets as the most profitable, especially for item types like **`Fruits and Vegetables**` and `**Health and Hygiene`.**

**5. Customer Rating Analysis**

* **Rating Distribution**

**Customer Satisfaction:** Majority ratings are concentrated around the middle to high range.

* **Sales by Rating**

**Correlation:** Higher customer ratings are positively correlated with increased sales, suggesting a direct impact of quality on revenue.