



Egyptian Russian University

Faculty of Management, Economic and Business Technology

TechnoGo Project

Marketing Analytics Project

BUA302

Name	ID
Mariam Tamer Mohammed	224284
Eriny Daood Zakaria	224144
Omar Gamal Abd Elzaher	224037
Ezzeldin Shady Youssef	224152
Mohammed Ahmed Wageih	224140

Supervised by

LA.Safaa Eldin

Dr. Monna Mousa

Spring 2025

Project idea

The main idea behind this dataset is to analyze customer purchase behavior in the electronics market. It allows for:

Understanding customer preferences and purchasing patterns

Segmenting customers based on demographics and buying habits

Performing sales trend analysis over time

Conducting predictive and diagnostic analytics (e.g., forecasting sales, identifying key factors influencing purchases)

1. Product/Service Description

- **Company Overview:**

TechnoGo is an Egyptian technology brand established in 2023, specializing in high-quality, innovative technology devices, including laptops and accessories. The company aims to deliver cutting-edge performance and stylish designs to meet the needs of tech-savvy consumers in Egypt and beyond.

- **Product:**

Premium laptops for users aged 18-45 years, featuring high-performance processors, sleek designs, and advanced features like long battery life and customizable configurations. The laptops cater to students, professionals, and gamers.

- **Target Audience:**

- Individuals aged 18-45 years, including students, young professionals, and gamers.
- Residing in major cities (Cairo, Giza, Alexandria).
- Seeking reliable, high-performance, and stylish technology devices.
- Interested in durability, modern features, and value for money.

2. Marketing Channels Used

- **Social Media Platforms:**

- **Instagram:** Share high-quality visuals and videos of laptops, with interactive Stories (polls on preferred features, Q&A about specs).
- **Facebook:** Run targeted ads for specific audience segments (students, professionals) and engage in tech-related groups.
- **TikTok:** Create short, engaging videos demonstrating laptop features (gaming performance, portability).

- **Email Marketing:**

- Send personalized offers, product updates, and newsletters to customers in the database, highlighting promotions and new laptop models.

- **Paid Ads:**

- **Meta Ads** (Facebook and Instagram): Target ads to tech enthusiasts and professionals in major cities.
- **Google Ads**: Drive traffic to the TechnoGo website using keywords like "high-performance laptops" and "best laptops in Egypt."
- **Website Traffic and SEO**:
 - Optimize the website for keywords such as "premium laptops Egypt" and "Tech laptops for students."
 - Develop a dedicated landing page for each laptop model to showcase specs, features, and customer reviews.

3. Data Sources

- **Google Analytics**:
 - Track website traffic, visitor sources (social media, paid ads), and user behavior on laptop product pages.
 - Example: Analyze bounce rates, time spent on pages, and conversion rates to understand customer engagement and preferences.
- **Meta Ads Insights**:
 - Evaluate ad performance on Facebook and Instagram (impressions, click-through rates, cost per click).
 - Example: Identify which ad creatives or audience segments (gamers vs. students) drive the highest engagement for customer behavior insights.
- **CRM Data/Excel Sheets**:
 - Collect customer data, including purchase history, browsing behavior, and demographic details.
 - Example: Segment customers by city (Cairo vs. Alexandria) or user type (students vs. professionals) to study purchasing patterns and preferences.
- **Visualization Tools**:
 - Use PowerBI to create interactive dashboards visualizing KPIs like customer acquisition rates, retention trends, and behavioral patterns.

4. Key Performance Indicators (KPIs)

1. Total Revenue

The total amount of money generated from all customer purchases, including product prices and add-ons.

2. Average Order Value (AOV)

The average amount of money spent per order, calculated by dividing total revenue by the number of orders.

3. Total Completed Orders

The number of customer orders that were successfully processed and marked as “Completed.”

4. Cancellation Rate

The percentage of orders that were cancelled out of all orders placed.

5. Loyalty Membership Rate

The proportion of unique customers who are enrolled in the company’s loyalty program.

6. Average Rating

The average customer satisfaction score (typically out of 5) based on product reviews.

7. Top Selling Product by Quantity

The product type that has sold the highest total number of units across all orders.

8. Average Spend per Customer

The total revenue divided by the number of unique customers, showing how much each customer spends on average.

9. Payment Method Usage Rate

The percentage breakdown of the different payment methods used by customers (e.g., cash, card, PayPal).

10. Most Frequently Purchased Add-on

The additional product or service that appears most often in customer purchases.

5. Types of Analysis:

Diagnostic Analysis (Why did it happen?)

Understanding reasons behind trends or problems.

Analytical Questions:

1. What are the main reasons behind order cancellations?
2. Is there a relationship between low ratings and cancelled orders?
3. Does the payment method (e.g., Credit Card vs PayPal) affect order completion?
4. Do large quantities increase the likelihood of cancellations?
5. Does the shipping type (Standard vs Express) impact customer satisfaction?

Predictive Analysis (What might happen next?)

Using data to forecast customer behavior or outcomes.

Analytical Questions:

1. Which factors can help predict if an order will be cancelled?
2. If a customer rates a product below 3, how likely is it that the order gets cancelled?
3. Is the payment method a predictor of order completion?
4. How can we use shipping type and rating to predict future order outcomes?
5. What are the common characteristics of successfully completed orders?

A/B Testing (Which version performs better?)

Comparing two alternatives to see which one gives better results.

Analytical Questions:

1. Does Express/Overnight shipping result in better performance than Standard shipping?
 2. Which shipping type receives higher customer ratings?
 3. What is the cancellation rate difference between shipping types?
 4. Is there a difference in customer behavior based on payment method?
 5. Will improving the shipping method increase customer satisfaction and order completion?
-

6-Findings and Observations:

Campaign Performance Analysis

- **Sales Trends:** There is a clear increase in total revenue and order volume during promotional months (e.g., Black Friday in November and Back-to-School in August), indicating campaign success during those periods.
- **Conversion Boost:** A notable spike in completed orders occurred during email and loyalty campaigns, especially among loyalty members.
- **Add-On Sales:** Campaigns encouraging bundle purchases showed a 15–20% increase in add-on total compared to regular periods

Objective

The objective of this analysis is to evaluate the performance of marketing campaigns conducted between September 2023 and September 2024 using transactional sales data. This includes analyzing customer behavior, sales trends, and key performance indicators (KPIs) to determine

the effectiveness of promotional strategies. The goal is to compare actual results against predefined business targets, highlight strengths in campaign execution, and identify opportunities for improvement to enhance future marketing effectiveness and customer engagement.

Strengths

- **High-performing Products:** Laptops and Smart Home Devices were the top-selling categories by both quantity and revenue.
- **Effective Loyalty Program:** Loyalty members spent ~30% more per order than non-members.
- **Preferred Payment Methods:** Credit cards dominated purchases (~60%), indicating strong trust in the platform.

Areas for Improvement

- **Order Cancellations:** Cancellation rate was highest among orders with express shipping — may indicate unmet delivery expectations.
- **Customer Ratings:** Lower ratings (≤ 3) were most common for accessories and refurbished items.
- **Add-On Optimization:** Many customers bought products without any add-ons — consider upselling or bundling strategies.

7-Recommendations

1. Focus Marketing on Smartphones & Smartwatches

- These two categories generate **>70% of total revenue**.
- Consider **bundling offers** or **loyalty programs** tied to these products.

2. Revamp or Phase Out Low-performing Products

- **Headphones** generated only ~4K — almost negligible.
- Reassess market demand or **replace with more profitable accessories**.

3. Boost Sales in Low-Performance Months

- **February, August, December** show revenue dips.
- Launch **seasonal promotions or events** (e.g., Valentine's, Back-to-School, Holiday Deals).

4. Diversify Order Channels to Increase Completion Rate

- Only **4K completed orders** for 36K quantity — likely due to bulk/partial orders.
- Consider improving **order fulfillment systems** or customer follow-up processes.

5. Capitalize on Top Payment Preferences

- All payment methods are used fairly evenly.

- Keep **multiple payment options available** to maintain convenience.
- Consider **promotions tied to specific methods** (e.g., PayPal cashback).

8-Dashboard....

9- Appendices (if applicable)

Explanation of the Columns

1. **customer_id**: Unique identifier for each customer.
2. **age**: Age of the customer.
3. **gender**: Gender of the customer (e.g., Male or Female).
4. **loyalty_member**: Indicates if the customer is a member of the loyalty program (e.g., Yes or No).
5. **product_type**: Type of product purchased.
6. **sku**: Stock Keeping Unit – a unique identifier for each product.
7. **rating**: Customer rating of the product (usually from 1 to 5).
8. **order_status**: Status of the order (e.g., Completed, Cancelled).
9. **payment_method**: Payment method used by the customer (e.g., Credit Card, PayPal).
10. **total_price**: Total price of the order.
11. **unit_price**: Price per unit of the product.
12. **quantity**: Number of units purchased.
13. **purchase_date**: Date of the purchase.
14. **shipping_type**: Type of shipping selected (e.g., Standard, Express).
15. **add-ons_purchased**: Add-ons or extras purchased with the product.
16. **add-on_total**: Total cost of the add-ons.

10- Final Marketing Plan

- **Marketing Goal**

Increase order conversion rates by 20% and reduce cost per acquisition (CPA) by optimizing marketing campaigns and improving customer retention through targeted promotions and loyalty programs.

- **Target Audience**

Primary Segment:* Tech-savvy individuals aged 18-45 residing in major Egyptian cities (Cairo, Giza, Alexandria).

Sub-segments:

- Students seeking affordable, high-performance laptops and accessories.
- Young professionals requiring reliable and stylish devices for work.
- Gamers looking for powerful laptops and smart devices with advanced features.

- **Strategy**

Platforms:Focus on Instagram, Facebook, TikTok, and Email marketing for personalized communication.

Content Direction:

- Highlight the premium features and stylish designs of TechnoGo laptops and smart devices.
- Use video demonstrations for gaming and productivity use cases.
- Promote bundle offers and loyalty benefits to increase add-on sales and repeat purchases.

Key Messages:

- "TechnoGo – Your Trusted Partner for High-Performance, Stylish Tech."
- "Exclusive bundles and loyalty rewards just for you."
- "Seamless shopping with multiple payment options and fast delivery."

- **Tactics**

- Launch seasonal promotional campaigns during low-sales months (February, August, December) including Valentine's Day, Back-to-School, and Holiday Deals.
- Use Meta Ads with precise audience targeting for gamers, students, and professionals, emphasizing bundle deals and loyalty program perks.
- Implement A/B testing on shipping options (Express vs. Standard) to optimize customer satisfaction and reduce cancellations.
- Send personalized email campaigns featuring product updates, promotions, and loyalty member exclusive offers.
- Develop engaging TikTok videos showcasing product use cases and customer testimonials.
- Enhance website SEO targeting keywords like "premium laptops Egypt" and create dedicated landing pages for each product model.

- **KPIs**

- Total revenue and Average Order Value (AOV) growth.
- Increase in total completed orders by 20%.
- Reduction in cancellation rate by 10%.
- Growth in loyalty membership rate by 15%.
- Improvement in average customer rating (target above 4).
- Increase in add-on sales by 25%.
- Higher engagement rates on social media ads and email campaigns (CTR and open rates).

- **Timeline & Budget**

Q2 2025:* Prepare and launch Back-to-School campaign, run A/B testing on shipping and payment methods (\\$15,000 budget).

Q3 2025:* Implement Valentine's and summer promotional offers; boost social media content creation (\\$20,000 budget).

Q4 2025:* Holiday deals campaign, loyalty program enhancements, and SEO optimization (\\$25,000 budget).

Ongoing:

Monthly monitoring of KPIs and continuous ad optimization.