

E-Commerce Conversion & Drop-Off Intelligence Dashboard

This project presents a multi-page Power BI dashboard designed to analyze customer journey behavior in an e-commerce environment. The objective is to identify conversion bottlenecks, cart abandonment trends, revenue leakage, and high-risk customer segments using a realistically simulated dataset of over 3,500 customer records generated in Python.

Project Objectives

- 1 Analyze the complete customer purchase funnel (Visit → Cart → Checkout → Purchase).
- 2 Measure overall conversion performance and funnel drop-off.
- 3 Detect cart abandonment behavior and estimate revenue loss.
- 4 Identify high-risk customer segments based on device, traffic source, and age group.
- 5 Evaluate customer value and geographic conversion patterns.

Dashboard Structure

- 1 Executive Overview: KPIs, Funnel Visualization, Conversion by Source, Device, and Age Group.
- 2 Drop-Off Intelligence: Cart Abandonment Analysis, Checkout Drop-Off, Gender Behavior, High-Risk Segment Matrix.
- 3 Deep Analysis: Revenue by Category, Conversion by Country, Revenue Lost by Device, Average Order Value, Customer Value Analysis.

Key Insights

- 1 Desktop users demonstrate the highest cart abandonment rate.
- 2 Google traffic delivers higher-quality conversions compared to other traffic sources.
- 3 The 35–44 age group shows the strongest conversion performance.
- 4 Significant revenue loss occurs due to customer drop-off before purchase.
- 5 Mobile contributes substantially to overall revenue leakage.

Tools & Skills Demonstrated

- 1 Power BI for dashboard development and visualization.
- 2 DAX for KPI and funnel calculations.
- 3 Python for synthetic dataset generation.
- 4 Business Analysis and KPI design.
- 5 Customer segmentation and revenue leakage analysis.
- 6 Data storytelling and analytical reporting.