

Exploratory Data Analysis (EDA) Report

Dataset: Online Orders of an E-commerce Website

What is EDA?

Exploratory Data Analysis (EDA) helps discover patterns, spot anomalies, and summarize data characteristics using statistics and visualization. It supports better business decisions and data understanding.

Steps Performed :

1. Data Import & Cleaning

- Data shape: Rows = 8083, Columns = 7
- Duplicate rows removed: 1331

2. Date Conversion

- Converted 'crawl_timestamp' to datetime

3. Category Extraction

- Extracted main product categories

4. Univariate Analysis

- Analyzed categories, brands, price distributions

5. Bivariate Analysis & Correlation

- Explored relationships between prices and discounts

6. Time Series Trend

- Visualized monthly product listings

Key Insights :

- Most listed product category: Clothing.
- Top brands by listing count: Karatcraft, Black, White.

- Retail prices are right-skewed, mostly under 10,000.
- Discounts vary widely, often between 50 and 5,000.
- Strong positive correlation observed between retail and discounted price.
- Monthly listings show seasonal patterns linked to promotions or festivals.

Next Steps :

- Handle any missing values.
- Explore discount patterns across categories.
- Analyze seasonal effects on product listings.
- Investigate customer behavior if user data is available.