

Data Insights and Analysis Report

Overview of the Dataset

The dataset comprises information on product returns, including details such as:

- **AWB Number:** Unique identifier for each return.
- **Return Status:** Indicates the status of the return (e.g., RETURN_PROCESSED, RETURN_DELIVERED, RETURN_CREATED).
- **Reason for Return:** Specifies why the product was returned (e.g., "Not Happy With Product Quality").
- **SKU:** Stock Keeping Unit, a unique identifier for each product.
- **Order Details:** Includes the order ID and the return date.
- **Platform Information:** Indicates the channel through which the return occurred.
- **Warehouse and Courier Details:** Information about logistics.

Objective

The objective is to analyze the dataset to gain insights into return patterns, reasons for returns, and platform performance. These insights can help improve customer satisfaction and operational efficiency.

Data Cleaning Process

1. **Handling Missing Values:**
 - Replaced missing values with placeholders or default values using Power BI's "Replace Values" feature.
 - Columns like "Warehouse," "Return Courier," and "Received Date" had significant missing data, which were appropriately managed.
 2. **Correcting Data Types:**
 - Ensured columns such as "AWB Number" and "Order ID" were set to text.
 - Columns like "Return Quantity" and "SKU" were formatted as numbers.
 - Dates were converted to proper date formats for analysis.
 3. **Removing Unnecessary Columns:**
 - Dropped irrelevant columns (e.g., unnamed indices) to streamline the analysis.
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Data Insights

1. Return Patterns

- **Total Returns:** The dataset contains a total of **7,164 records**.
- **Common Return Status:**
 - "RETURN_PROCESSED" is the most frequent status, indicating most returns were successfully processed.
- **Popular Return Reasons:**
 - "Not Happy With Product Quality" and "Does Not Fit Well" were the most cited reasons for returns.

2. Platform Performance

- **Channel 1** accounted for a majority of the returns, suggesting either higher sales volume or operational inefficiencies in this channel.

3. Product-Specific Insights

- Products with **specific SKUs** experienced higher return rates, often due to issues such as incorrect sizing or poor quality.

4. Logistics Analysis

- Several records showed missing data in courier and warehouse fields, indicating gaps in tracking logistics performance.

Proposed Actions

1. **Enhance Product Quality:**
 - Address issues related to commonly returned products to reduce return rates.
2. **Improve Size Guides:**
 - Provide detailed size charts and customer reviews to assist with purchasing decisions.
3. **Optimize Logistics Tracking:**
 - Implement better tracking systems to ensure all logistics fields are captured.
4. **Platform-Specific Focus:**
 - Investigate the high return rates in Channel 1 to identify root causes.

Visualizations in Power BI

The Power BI dashboard includes the following visuals:

1. **Return Status Distribution**
 - A pie chart showing the percentage of returns by status.
2. **Return Reasons Breakdown**
 - A bar chart highlighting the top reasons for returns.
3. **Platform Performance**
 - A column chart comparing returns across different sales channels.
4. **Logistics Overview**
 - A table showing missing data counts in logistics-related columns.

Conclusion

The analysis highlights key areas for improvement in product quality, sizing accuracy, and logistics tracking. Addressing these issues can help reduce return rates, improve customer satisfaction, and enhance overall operational efficiency.

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