Data Analysis Report

Report Generated: 2025-07-12 11:20:02
Data Shape: 365 rows, 7 columns
Data Columns: date, sales_amount, customer_count, region, product_category, discount_percentage, satisfaction_score

Executive Summary

This report presents a comprehensive analysis of the provided dataset containing 365 records and 7 features. The dataset includes 4 numeric columns and 3 non-numeric columns. Key metrics show average values ranging from 4.18 to 1151.66 across numeric features.

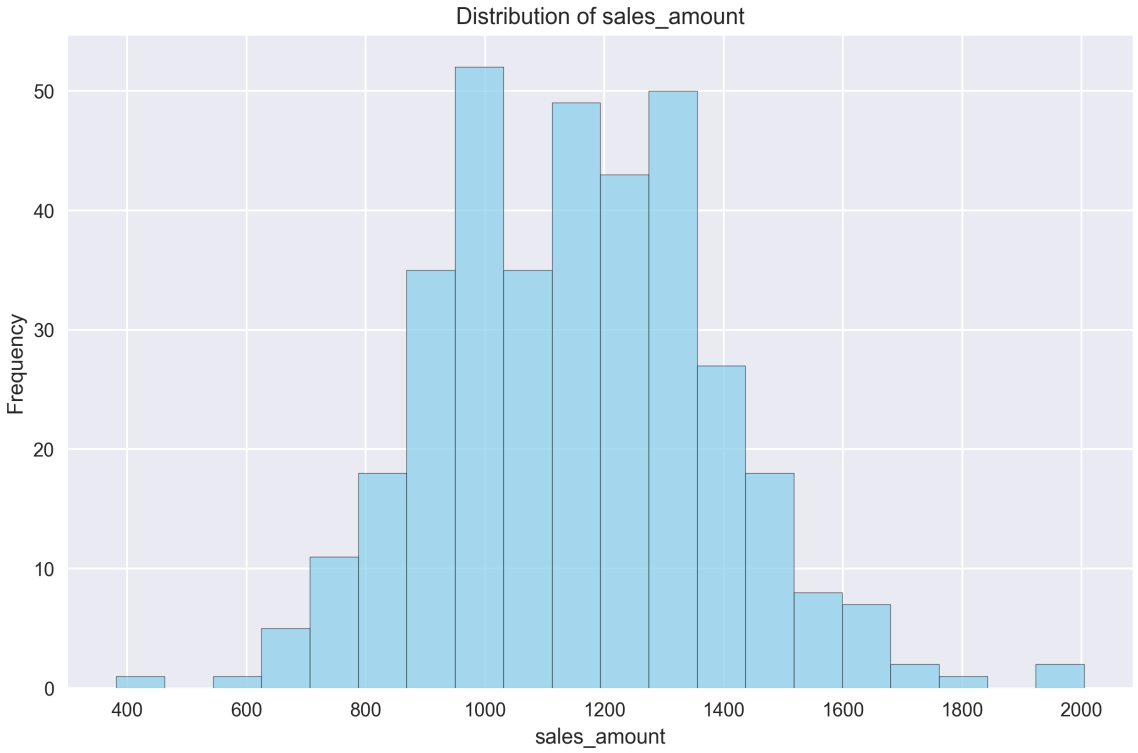
Data Quality Assessment

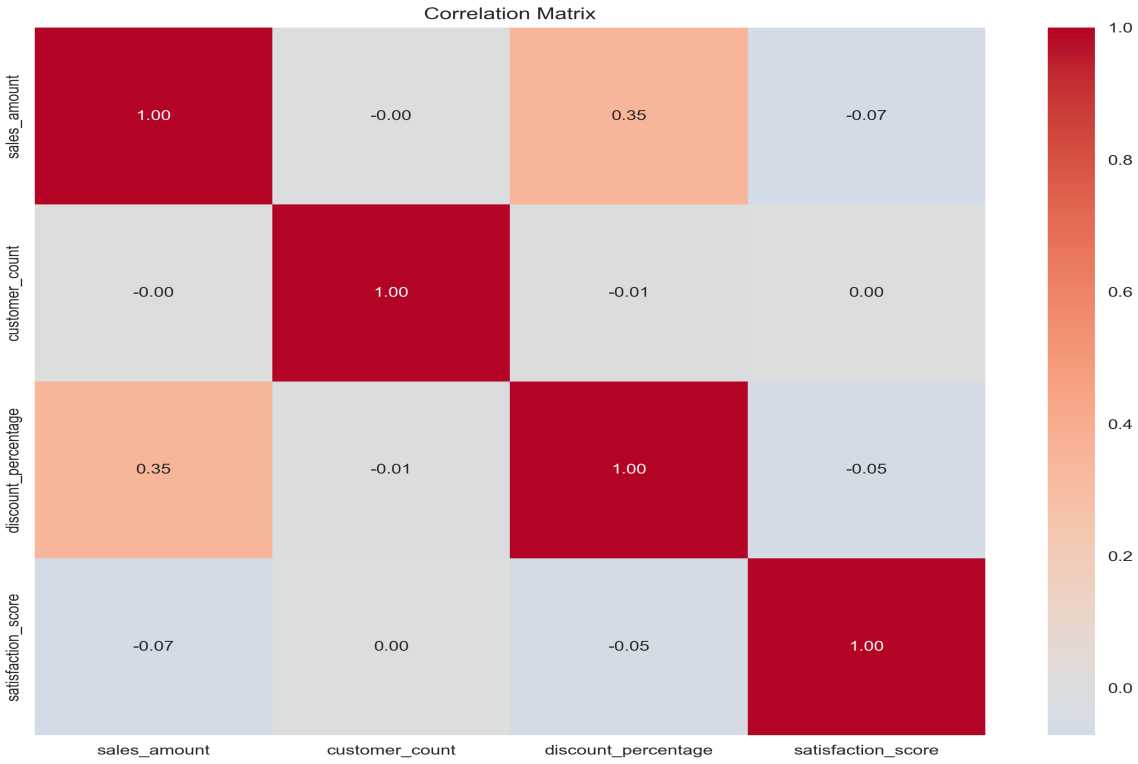
Data quality analysis reveals 0 missing values across all columns, representing 0.00% of the total dataset. The dataset is complete with no missing values.

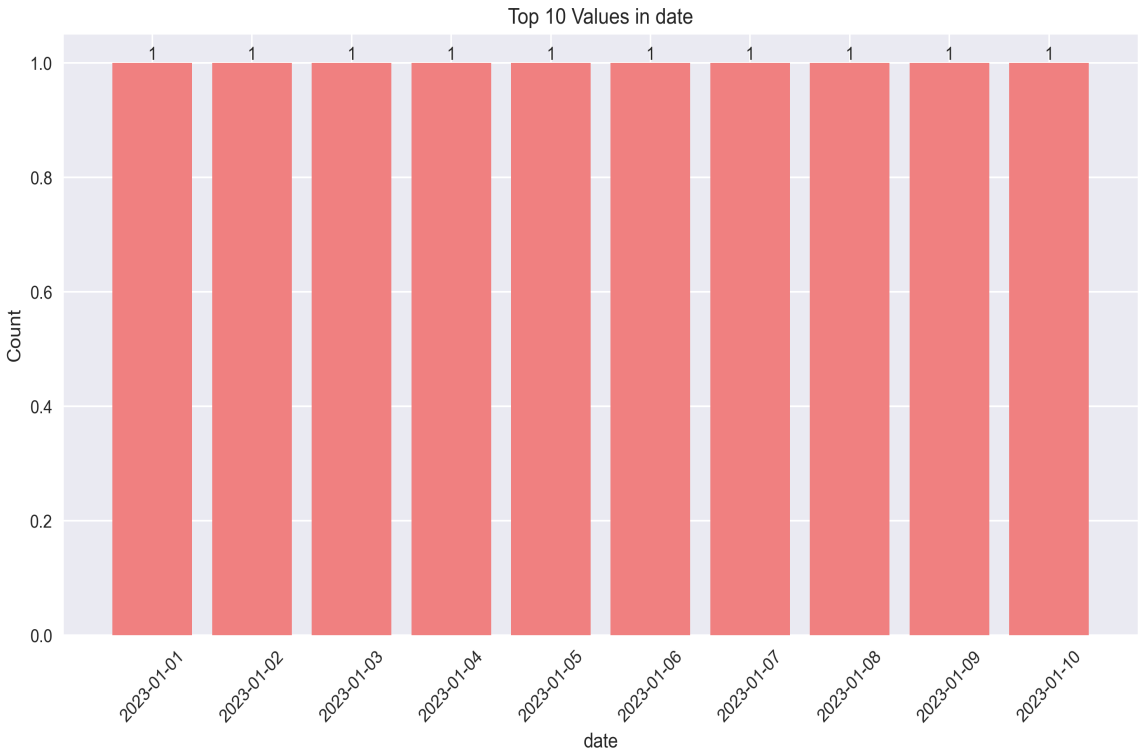
Summary Statistics

Statistic	sales_amount	customer_count	discount_percentage	satisfaction_score
count	365.00	365.00	365.00	365.00
mean	1151.66	49.62	14.98	4.18
std	232.76	7.37	8.61	0.67
min	381.52	30.00	0.10	1.85
25%	979.06	44.00	7.53	3.76
50%	1149.96	50.00	15.37	4.23
75%	1317.75	54.00	22.65	4.77
max	2004.36	72.00	29.95	5.00

Data Visualizations


Distribution of sales_amount
Frequency
sales_amount
0
10
20
30
40
50
400
600
800
1000
1200
1400
1600
1800
2000


Correlation Matrix
sales_amount
customer_count
discount_percentage
satisfaction_score
1.00
-0.00
0.35
-0.07
-0.00
1.00
-0.01
0.00
0.35
-0.01
1.00
-0.05
-0.07
0.00
-0.05
1.00
1.0
0.8
0.6
0.4
0.2
0.0



Key Insights and Recommendations

Based on the comprehensive analysis of the dataset, several key insights emerge: 1. **Data Completeness:** The dataset quality assessment provides a foundation for understanding data reliability and areas requiring attention. 2. **Statistical Patterns:** The summary statistics reveal the central tendencies and distributions of key metrics within the dataset. 3. **Visual Trends:** The accompanying visualizations highlight important patterns and relationships that warrant further investigation. **Recommendations:** • Implement data validation procedures to maintain data quality • Consider additional feature engineering based on observed patterns • Establish monitoring systems for key metrics identified in this analysis • Plan for regular data quality assessments to ensure ongoing reliability