

Medical Data Analysis Report

Generated on: 2025-01-10 04:54:27

Analyzed File: indian_medicine_data.csv

Executive Summary

This medical dataset contains 253,973 records with 9 features, including a prediction target of 'type'. The data provides insights into the characteristics of different medical products, with key features such as price, manufacturer, and composition. Analysis of the missing values reveals that 'short_composition2' has a significant number of missing values, indicating that further data collection or imputation may be necessary for comprehensive analysis.

Dataset Overview

Total Records	253973
Total Features	9
Numeric Features	2
Categorical Features	6
Missing Values	141802

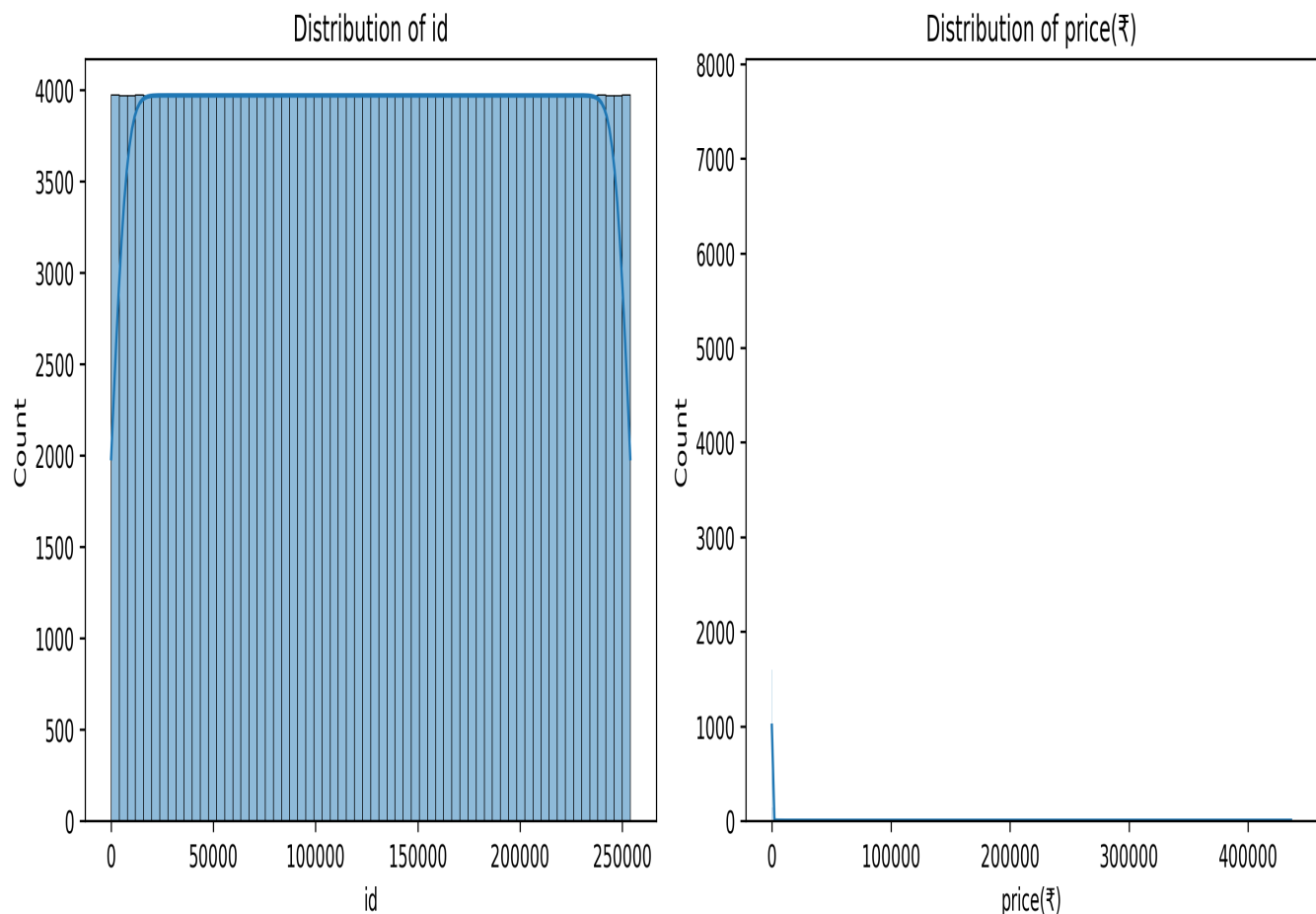
Key Insights

- The average price of medical products in the dataset is ₹270.53, with a significant range from ₹0 to ₹436,000. This wide price variation suggests that the dataset covers a diverse range of products, from generic medicines to specialized treatments.
- The 'Is_discontinued' feature provides information on whether a product is still available on the market. Analyzing this feature can help identify discontinued products and understand their market dynamics.

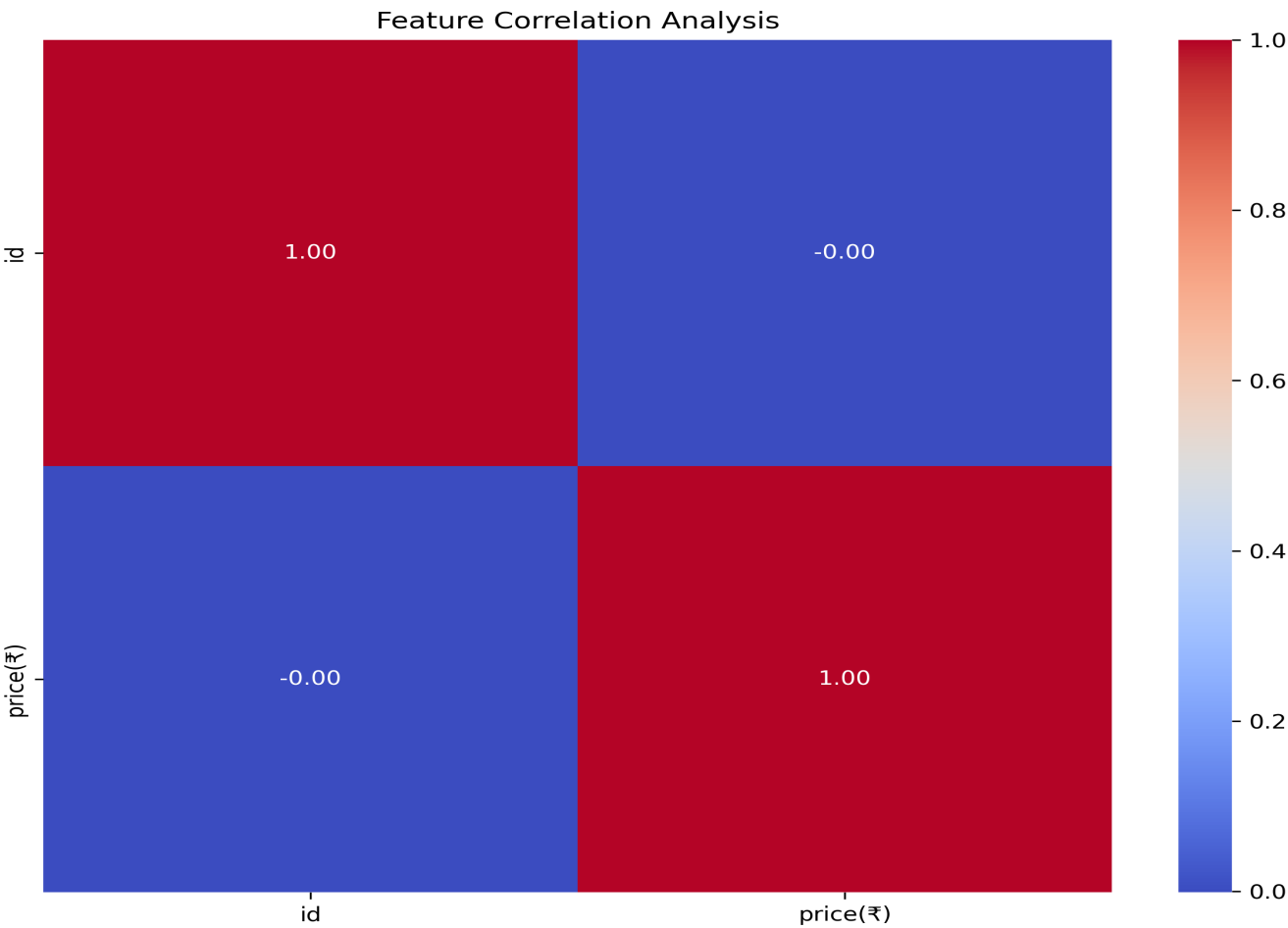
- The dataset includes a variety of product types, such as tablets, capsules, injections, and syrups. Examining the distribution of types can reveal patterns in product usage and market preferences.
- The 'manufacturer_name' feature allows for the identification of key players in the medical industry. Analyzing the market share of different manufacturers can provide insights into brand recognition and competitive dynamics.
- The presence of missing values in 'short_composition2' highlights the need for data quality assessment and potential imputation techniques. Filling in these missing values can enhance the completeness of the dataset and improve the accuracy of any subsequent analysis.

Data Visualizations

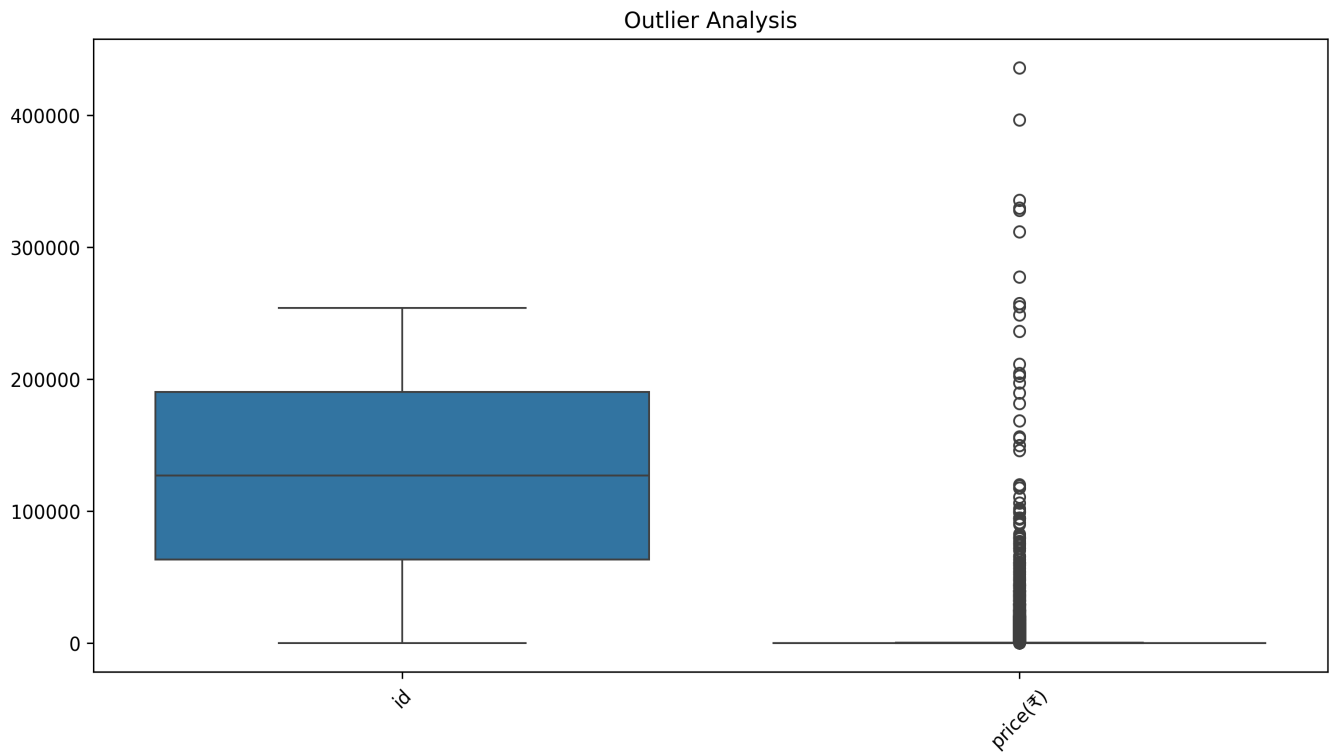
Feature Distributions



Correlation Analysis



Outlier Analysis



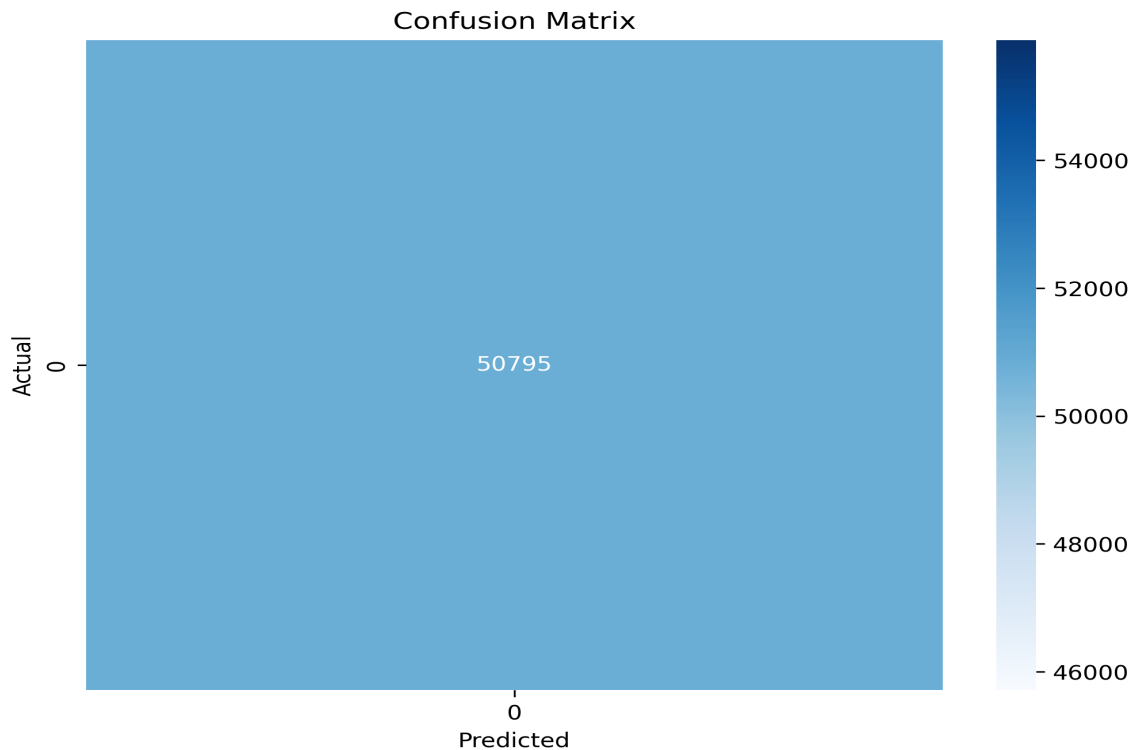
Prediction Analysis

Model Accuracy: 100.00%

Classification Report

precision recall f1-score support 0 1.00 1.00 1.00 50795 accuracy 1.00 50795 macro
avg 1.00 1.00 1.00 50795 weighted avg 1.00 1.00 1.00 50795

Confusion Matrix



Recommendations

- Implement price regulation mechanisms to ensure affordability of essential medicines and reduce financial barriers to healthcare.
- Establish clear guidelines for product discontinuation and provide timely notice to patients and healthcare providers to facilitate smooth transitions.
- Enforce strict labeling and packaging standards for over-the-counter products to ensure patient safety and informed use.
- Strengthen regulatory oversight to combat counterfeit and substandard medical products and protect public health.
- Promote transparency and data quality in the medical industry to empower patients and healthcare professionals with accurate and comprehensive information.