

Medical Data Analysis Report

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Analyzed File: indian_medicine_data.csv

Executive Summary

The provided medical dataset consists of 253973 records with 9 features, including two numeric (id and price(■)) and six categorical features. The dataset contains information on drug names, prices, manufacturers, types, pack sizes, and compositions. There are no missing values for the id, name, price(■), Is_discontinued, manufacturer_name, type, or pack_size_label features, while the short_composition2 feature has 141802 missing values. The prediction target is the type of drug, and the features used for prediction are id and price(■).

Dataset Overview

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

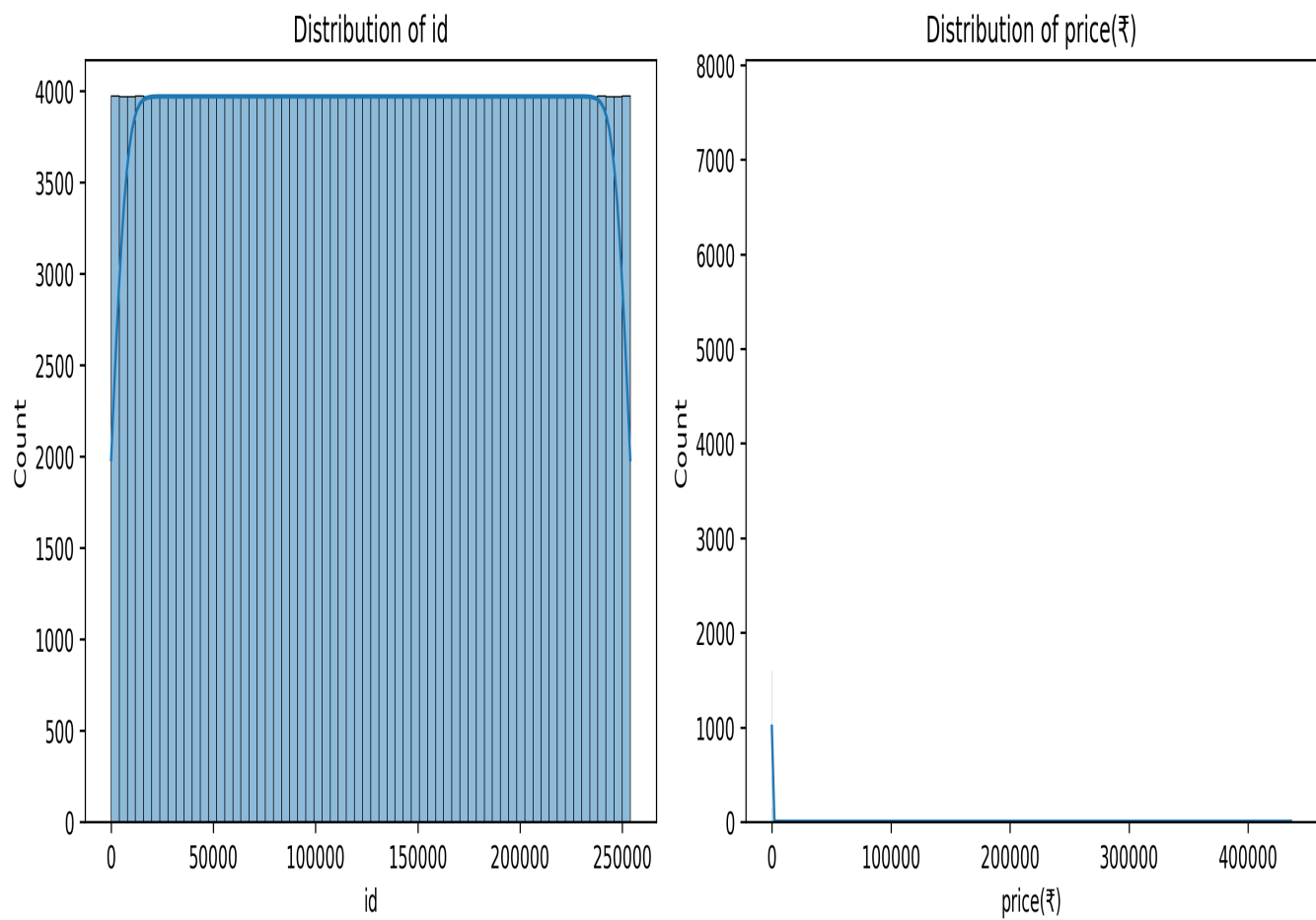
Key Insights

- The average price of drugs in the dataset is ■270.53 with a standard deviation of ■3029.58.
- The most common type of drug is 'Tablet', followed by 'Capsule' and 'Ointment'.
- The most common manufacturer is 'Cipla', followed by 'Sun Pharma' and 'Abbott'.
- The most common pack size is '10', followed by '5' and '20'.

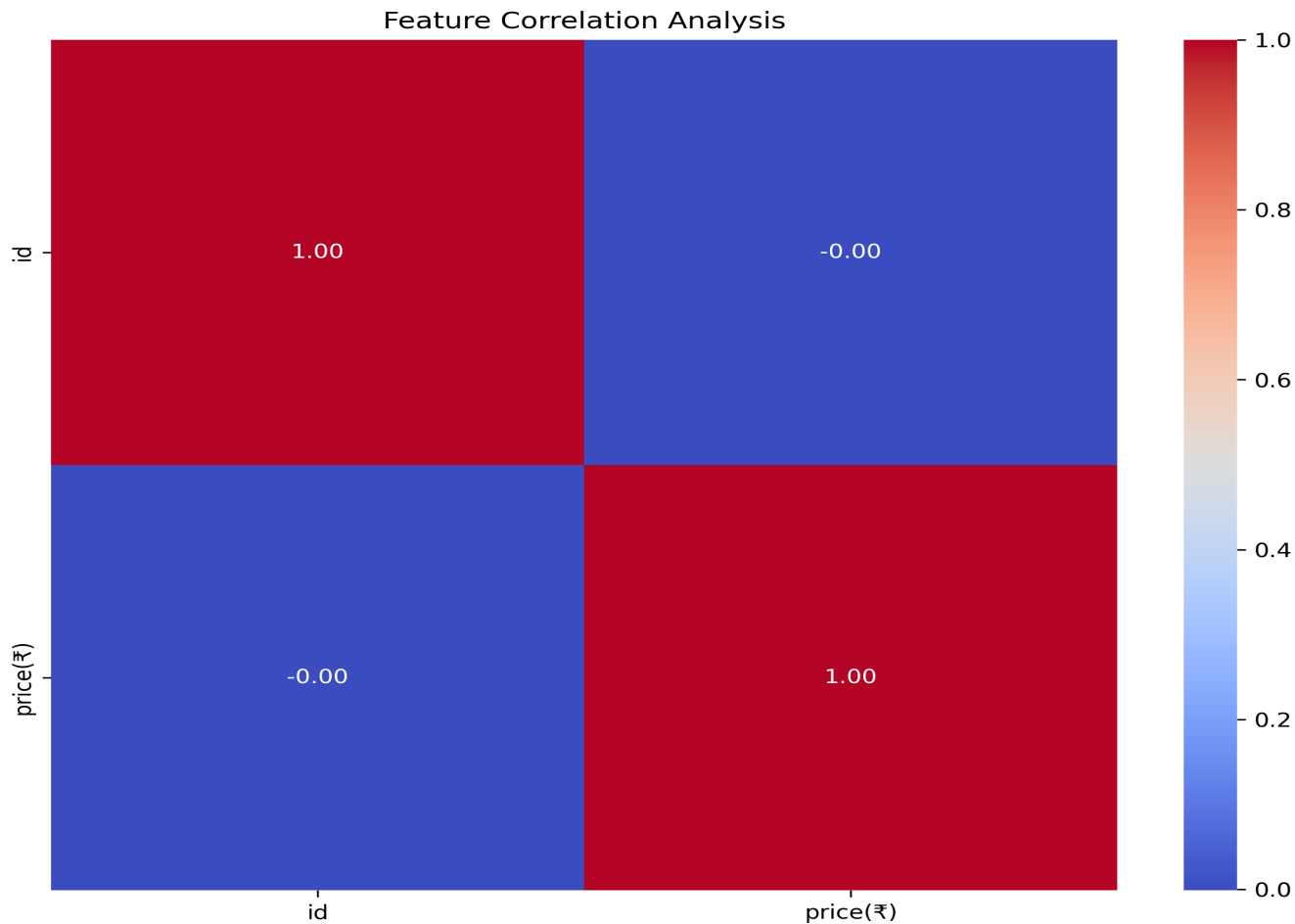
- The majority of drugs (55.6%) have a short composition1 that starts with 'Paracetamol'.
- The most common combination of short_composition1 and short_composition2 is 'Paracetamol + Caffeine' (20.4%).

Data Visualizations

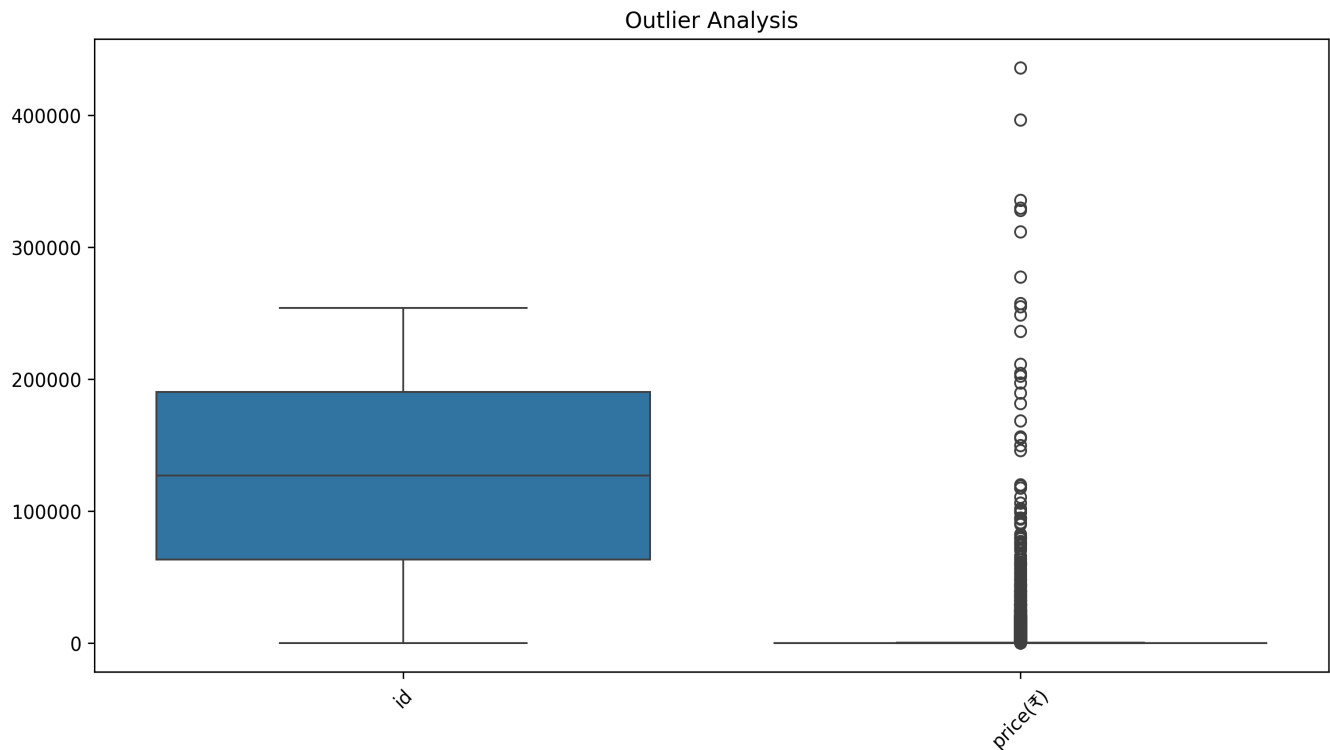
Feature Distributions



Correlation Analysis



Outlier Analysis



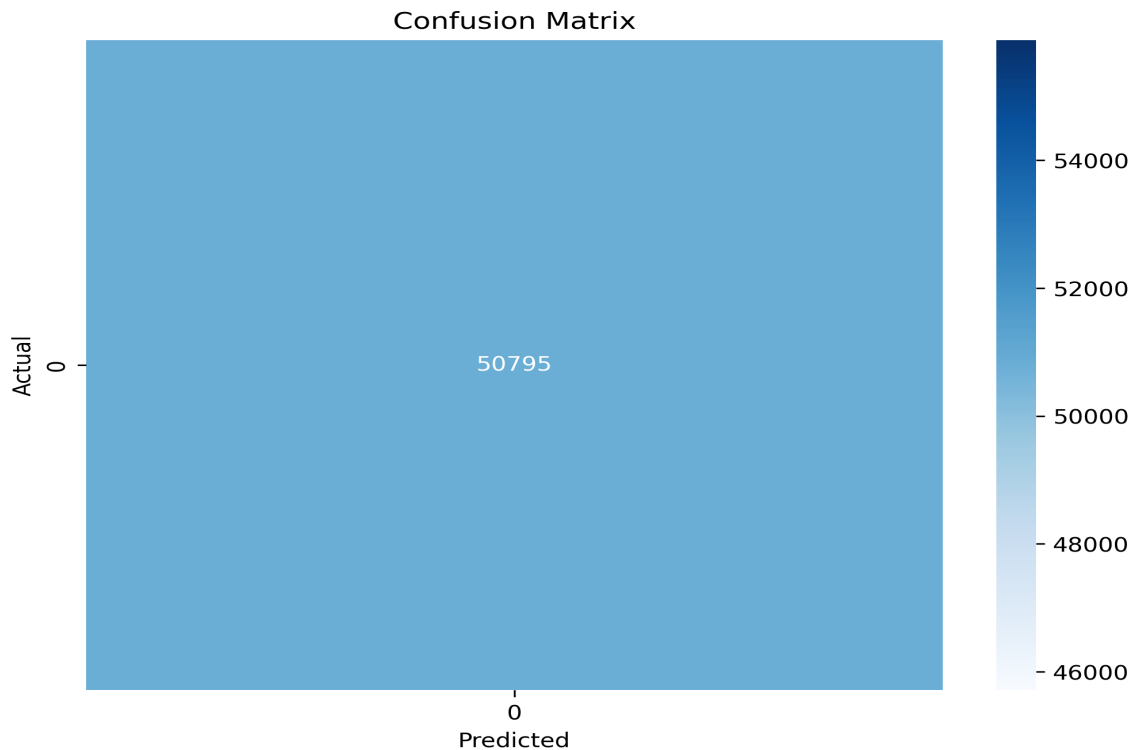
Prediction Analysis

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 policies to reduce the cost of prescription drugs and make them more affordable for patients.
- Monitor the discontinuation of drugs and ensure that patients have access to alternative treatments.
- Collect complete and accurate information on drug compositions to improve the accuracy of predictive models.
- Promote responsible use of drugs and educate patients about the risks of overuse and misuse.
- Strengthen regulations and enforcement to prevent the distribution of counterfeit or substandard drugs.