Gold Price Prediction Using Machine Learning

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Introduction

- The price of gold plays a crucial role in the global economy, acting as a benchmark for monetary stability and an investment safe haven. Its value is influenced by various factors such as currency fluctuations, inflation rates, geopolitical tensions, and market sentiment. Predicting gold prices is a challenging task due to the dynamic and complex nature of these influences. Machine learning (ML) offers powerful tools to analyze patterns and trends in historical data, enabling more accurate forecasting compared to traditional methods.

Problem Statement

- Gold price prediction is a vital tool for investors, policymakers, and financial analysts. However, existing methods often fail to capture the intricate relationships among the various factors influencing gold prices. Traditional statistical models may lack the flexibility to account for non-linear patterns and interdependencies. This project aims to develop a machine learning-based approach to address these challenges and improve the accuracy of gold price forecasts.

Goals

- To analyze historical data and identify key features influencing gold prices.
- To develop and implement machine learning models for gold price prediction.
- To compare the performance of various ML models (e.g., Linear Regression, Random Forest, LSTM) and select the most suitable one.
- To provide insights into the relationships between economic indicators and gold prices.
- To validate the model on unseen data to ensure generalization and robustness.