

Asset Price Prediction - Project Report

Introduction

This report presents an implementation of machine learning models to predict the price of a financial asset (Google stock) based on historical data. The study explores time series forecasting using techniques such as ARIMA, XGBoost, and LSTM.


Objective

To forecast future stock prices using machine learning and deep learning models and compare their performance.


Tools & Libraries Used

- Python
- Pandas, NumPy, Matplotlib
- Scikit-learn
- XGBoost
- TensorFlow/Keras
- ARIMA

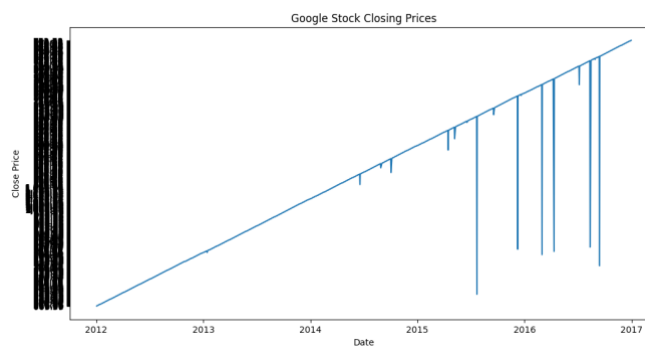
Summary of Notebook Implementation

 Asset Price Prediction using Machine Learning

This notebook demonstrates how to use various ML models to predict stock prices, including LSTM, ARIMA, and XGBoost.

 **ARIMA Model (Statistical Time Series)**

AutoRegressive Integrated Moving Average model is used as a traditional forecasting approach.

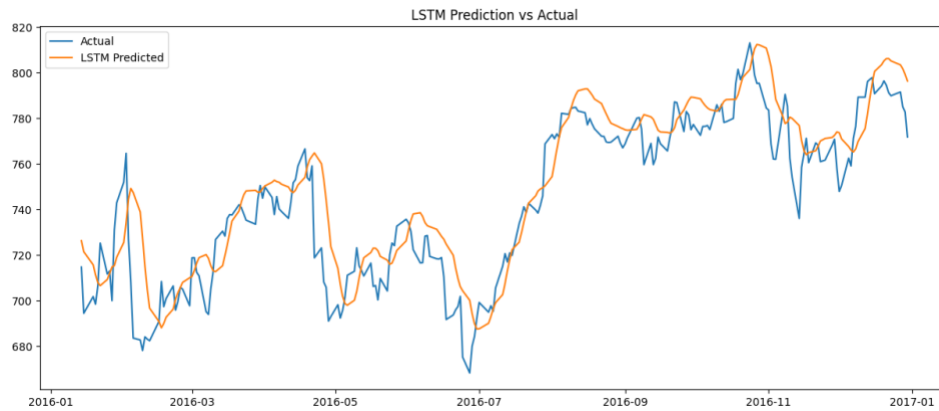


🌲 **XGBoost Model (Machine Learning)**

Extreme Gradient Boosting model using lag features for stock price prediction.

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XGBoost RMSE: 9.817055317193104
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📊 **LSTM Model (Deep Learning)**



Prediction File

<https://drive.google.com/file/d/1dTKpO26ve3no90h0Hes7y1ielfkhMr0u/view?usp=sharing>

Github Repo Link

<https://github.com/gitgeek28/Asset-Price-Prediction>