Crypto Price Tracker

Abstract

The Crypto Price Tracker is a real-time monitoring application designed to fetch, display, and analyze live cryptocurrency prices using the CoinGecko API. It provides users with continuous updates on coin values, allows setting personalized alert thresholds, and delivers email notifications when specified conditions are met. The project integrates visualization tools and user interaction elements to enhance decision-making for crypto enthusiasts and traders.

Introduction

Cryptocurrencies are highly volatile assets, making real-time tracking essential for traders and investors. The Crypto Price Tracker project aims to simplify this process by offering a user-friendly dashboard that monitors and visualizes price fluctuations. Built using Python and Streamlit, it allows users to set alerts, receive notifications, and observe live market trends from a single interface.

Tools Used

- Python – Core programming language
- requests – For fetching live data from CoinGecko API
- Streamlit – To create an interactive web-based dashboard
- smtplib – For sending email alerts
- Plotly – For visualizing price trends in line charts
- Pandas – For handling and analyzing the fetched data

Steps Involved in Building the Project

1. Fetch cryptocurrency prices using the CoinGecko API.
2. Process and display the data in a dynamic Streamlit interface.
3. Implement input fields for user-defined alert thresholds.
4. Send automated email alerts when prices meet threshold conditions.
5. Continuously refresh prices at regular intervals.
6. Visualize historical and live data using Plotly line charts.

Conclusion

The Crypto Price Tracker provides an efficient and interactive way to monitor cryptocurrency prices and automate alerting mechanisms. By combining live data visualization with user-defined parameters, it simplifies the tracking process for digital asset investors. This project demonstrates practical integration of APIs, data visualization, and automation in a real-world financial monitoring scenario.