Frontend Software Engineer Assignment - Open Innovation AI

Objective

Develop a web-based application that allows users to dynamically add, remove, and modify charts on a page, with each chart being highly configurable.

Technical Requirements

- Use React with Vite.js for development
- Utilize the FRED Series API for data sources
- Implement robust error handling and loading states
- Ensure responsive design for various screen sizes

Functional Requirements

1. Dynamic Chart Management

- Design an intuitive and user-friendly interface for adding, removing, modifying, and configuring charts
- Users should be able to add new charts to the page
- Users should be able to remove existing charts from the page
- Users should be able to modify the configuration of existing charts on the page

2. Chart Configuration

Each chart should be independently configurable with the following options:

a) Data Source

- Allow users to select and plot data series from the FRED Series API
- Implement a search functionality for FRED Series

b) Chart Types

- Provide options for at least two chart types: line and bar

c) Title

- Allow users to set and edit a custom title for each chart

d) Axes Configuration

- Allow users to set the name of the Y axes
- Allow users to set the time frequency

e) Styling

- Provide options to customize chart appearance, including:
- Colors for lines or bars.
- Line styles (for line charts).
- Bar styles (for bar charts).

FRED API Integration

- API Documentation: https://fred.stlouisfed.org/docs/api/fred/
- API Key: b5012636c81dde3475ff4c99dba14ec9
- Note: Please be careful when copying the API key. Some characters may be missed during copy-paste. Double-check to ensure you have the correct key.
- Note: If you encounter CORS issues with the API, investigate and implement a suitable solution.

Submission Guidelines

- Submit the project as a zip file, excluding the node_modules directory