Full-stack Code Test for SQSE (India) Position

CMoR-AToM-MLiVE, 2023

Test Description:

In this test, you are expected to build a single page web application with two main components:

1) A frontend user interface built by modern JavaScript frameworks (e.g., React, Vue)
2) A web server that provides RESTful APIs (e.g., Python fastapi, nodejs, golang)

The single page app is required to realize:

1. A widget to upload dataset to the server. (A demo dataset will be provided.)
2. A scatter plot to visualize the uploaded dataset.
3. (Optional) Fit a linear model, show the fitted model coefficients and goodness-of-fit. Visualize the fitted linear model onto the scatter plot.

This code test should be done within **3 hours**. In submission, the source codes need to be organized in a readable format, together with a readme file to run the app.

Hints:

- To help build UI, you may use UI frameworks like https://mui.com/ for React and https://vuetifyjs.com/ for Vue.
- Your UI can be simple, but some degree of aesthetic and neatness is expected. Besides, a logical and intuitive UX is important.
- To fit a linear model, you may use Python sklearn.linear_model.LinearRgression or scipy.stats.linregress in the backend. You may also use nodejs, golang or other ways to achieve the same goal.