Euclid Innovations

Technical Test – IoT Usecase

# Problem Statement

There are a few Temperature Sensors in a building that send temperature readings every 10 seconds to an API endpoint. The API then stores the readings in a database. We would like you to build a dashboard to display sensor data from the database.

# Exercise

For the exercise, we will use a simple SQlite database. Assume that the data from the sensors is coming into the database, but fill the database with some simulated rows.

## Please use the following to build the dashboard

Database: Sqlite3

Backend: Node.js

Frontend: ReactJS

# Database Structure:

The SQlite database would have one table called “sensor\_data” with the following fields

sensor\_id (varchar 32)

sensor\_reading (int)

timestamp (datetime)

# Output

The desired output is

* A Node.js application with a frontend written in ReactJS
* a simple dashboard with a timeline chart that shows how the temperature varies over time for each sensor in the database.
* Please include data for atleast 3 sensor\_ids.
* Feel free to use any opensource ReactJS components/plugins for plotting.
* **NOTE:** The timeline charts have to be updated in realtime as new rows are added to the database. If there is not much time to implement a realtime update, please submit a static timeline chart at least.
* Please create a github repo and a README with clear instructions on how to run the application. We should be able to deploy and run on a local machine.

Any questions, please ask. Good Luck !!