Full-stack Take Home Assignment

Assignment Details

The goal of this exercise is to create a grocery store application that allows users to search and find products effectively. Your task is to implement the following features:

- Users should be able to view the list of products – including the product name, category, price, and image – that are available in the store. The list of products is provided in the file **data.json**.
- Users should be able to filter products by their category; for example, you can provide a dropdown that contains a list of the categories. Note that users should be able to see, **at a glance**, the filters applied to the products.
- Users should be able to sort products by price; for example, you can provide a button that does this sorting.

Keep in mind these non-functional requirements when developing:

- Use TypeScript/ReactJS for the Frontend.
- Use Python/FastAPI for the Backend.

You are free to use any additional libraries as you see fit to complete the assignment.

Bonus

- Create a containerized version of your application. Provide instructions on how to build and test this. You can use tools such as Docker Compose (if using Docker).
- Add a chatbot that can communicate with the users to provide recommendations on what products they might be interested in. This is based mainly on product availability and descriptions sent by the user through the chatbot interface.
- The application should be able to allow a maximum of 16,384 concurrent users to search and find products effectively.

Submission Instructions

- Return the assignment as a zip file (Please do not include build artifacts such as the **node_modules** folder).
- Add README.md that explains your solution and how to set up and run the application. Feel free to add diagrams if needed.