

# Full Stack Development with MERN

## Project Documentation format

### 1. Introduction

- **Project Title:**Sustainable Smart City Assistant Using IBM Granite LLM
- **Team Member:**K.Sneha

### 2. Project Overview

- **Purpose:** Briefly describe the purpose and goals of the project.
- **Features:** Highlight key features and functionalities.

### 3. Architecture

- **Frontend:** Describe the frontend architecture using React.
- **Backend:** Outline the backend architecture using Node.js and Express.js.
- **Database:** Detail the database schema and interactions with MongoDB.

### 4. Setup Instructions

- **Prerequisites:** List software dependencies (e.g., Node.js, MongoDB).
- **Installation:** Step-by-step guide to clone, install dependencies, and set up the environment variables.

### 5. Folder Structure

- **Client:** Describe the structure of the React frontend.
- **Server:** Explain the organization of the Node.js backend.

### 6. Running the Application

- Provide commands to start the frontend and backend servers locally.
  - **Frontend:** `npm start` in the client directory.
  - **Backend:** `npm start` in the server directory.

### 7. API Documentation

- Document all endpoints exposed by the backend.
- Include request methods, parameters, and example responses.

### 8. Authentication

- Explain how authentication and authorization are handled in the project.
- Include details about tokens, sessions, or any other methods used.

### 9. User Interface

- Provide screenshots or GIFs showcasing different UI features.

## **10. Testing**

- Describe the testing strategy and tools used.

## **11. Screenshots or Demo**

- Provide screenshots or a link to a demo to showcase the application.

## **12. Known Issues**

- Document any known bugs or issues that users or developers should be aware of.

## **13. Future Enhancements**

- Outline potential future features or improvements that could be made to the project.