Milestone Documentation: Data Aggregation for Harbor

Project Overview

Name: Harbor
Description: Harbor is a revenue management system for the self-storage industry. It aggregates data and pricing from storage facilities and uses AI to generate rate change recommendations.

Objective

This milestone focuses on developing and implementing the data aggregation infrastructure, essential for the core functionalities of the Harbor project.

Tasks and Deliverables

1. Node.js Backend Development

Objective:

Develop a robust Node.js backend system to effectively facilitate data aggregation.

Key Deliverables:

- **Scraping Bee API Integration:** Implement integration with the Scraping Bee API for data aggregation from various storage facilities.
- **Cron Jobs for Data Aggregation:** Configure cron jobs to automate data aggregation on weekly intervals.
- **MongoDB Integration:** Connect the backend with MongoDB for data storage and management.

2. MongoDB Deployment and Backups

Objective:

Establish a secure and reliable MongoDB database for storing all project-related data.

Key Deliverables:

- **MongoDB Deployment:** Deploy and configure MongoDB to handle scraped data and future user data.
- **Backup System:** Implement a regular backup system for data safety and integrity.

Scalability and Facility Registration

- **Facility Registration System:** Develop a system within MongoDB for easy registration of new storage facilities, enabling scalability and seamless expansion as new facilities are added.
- **Future Expansion Planning:** Design the code and database architecture to accommodate the project's growth, ensuring performance is maintained as the number of facilities increases.

Future Development Milestones

- **User Authentication and Frontend Logic:** Future milestones will focus on implementing user authentication using Next Auth and developing frontend logic, including user interfaces for data visualization and interacting with the rate change recommendation system.
- **Seamless Integration:** These developments will integrate smoothly with the existing MongoDB infrastructure, maintaining a cohesive and unified system.

Expected Outcomes

Completion of this milestone will result in a fully operational data aggregation system with robust backend support, ready for future integration with user management and frontend interfaces.