EcoHarbor Tracker

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Project Idea:

A Fishing Industry Sustainable Tracking Database System designed that aims to monitor and manage data related to fishing activities, ensuring the sustainability of marine resources while tracking the impact of fishing practices on ecosystems.

Basic Modules:

1) ***User Management Module:*** This module enables user registration, login and profile management and also provides features for password recovery.

2) ***Admin Dashboard:*** Administrators will have access to a dashboard for user management, system analytics, and monitoring overall system performance.

3) ***Data collection Module:*** This module is responsible for gathering carbon emissions data from various and data feeds. It ensures data is acquired, validated, and stored in a structured format for further analysis.

Specific Modules:

1) Weather Detection Module: This module provides comprehensive information on key weather parameters such as temperature, wind speed, precipitation and sea state. The module not only offers current weather updates but also includes historical data for trend analysis and prediction modeling. It also provides alert notification to the fisherman.

2) Reporting and Visualization Module: Users can view detailed reports and visualizations of their fishing patterns. The module provides insights into fishes caught, trends over time, and comparisons between various vessels.

3) Vessel & Fish Detection Module: This module helped in knowing user what all are the prospective vessels in which they can go and do fishing and what all types or species of fishes are available in a particular vessel.

4) Fishes Migration Pattern Module:- Fishes undertake some of the most awe-inspiring and complex migrations in the animal kingdom. These journeys can span thousands of kilometers, across oceans, rivers, and even over land. Understanding these patterns is crucial for fisheries management, conservation, and our overall knowledge of marine ecosystems.

Objectives:

- ***Empower fishers*** with accurate and actionable recommendations to increase their catch efficiency and optimize their fishing trips.
- ***Promote sustainable fishing practices*** by providing information on catch regulations and endangered species.
- ***Centralized Data Management*** by creating a unified platform to consolidate fishing related data, including vessel information,

coast information, fishes availability information, catch records.

- ***Data-driven Insights and Reporting*** by providing visualized information of catch records of fishing of each fisher and availability of each type in fishes in a graphical form.