Team 51

ASEAN-INDIA HACKATHON 2021

Problem #7 Statement

Traffic Management System in Coastal Regions.

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Introduction to Our Team

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Current Situation

Navigation along the coast is always a challenge due to various navigational hazards and restricted sea room. Heavy Traffic along the coast makes it more difficult.

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What We Built ?

Shipper.

Proposed System

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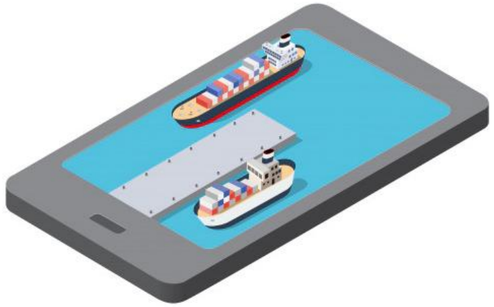

How do we solve the problem ?

The system makes use of already existing data sources (sensors) available on most ships like AIS & Radar, eliminating the need for extra infrastructure, and shows the details on a User-Friendly interactive Real-time Map.

It is equipped with smart features such as automatic vessel traffic detection, and head-to-head collision avoidance detection. The system automatically switches data sources like Radar, AIS & S-AIS based on the traffic conditions.

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Overview: Shipper

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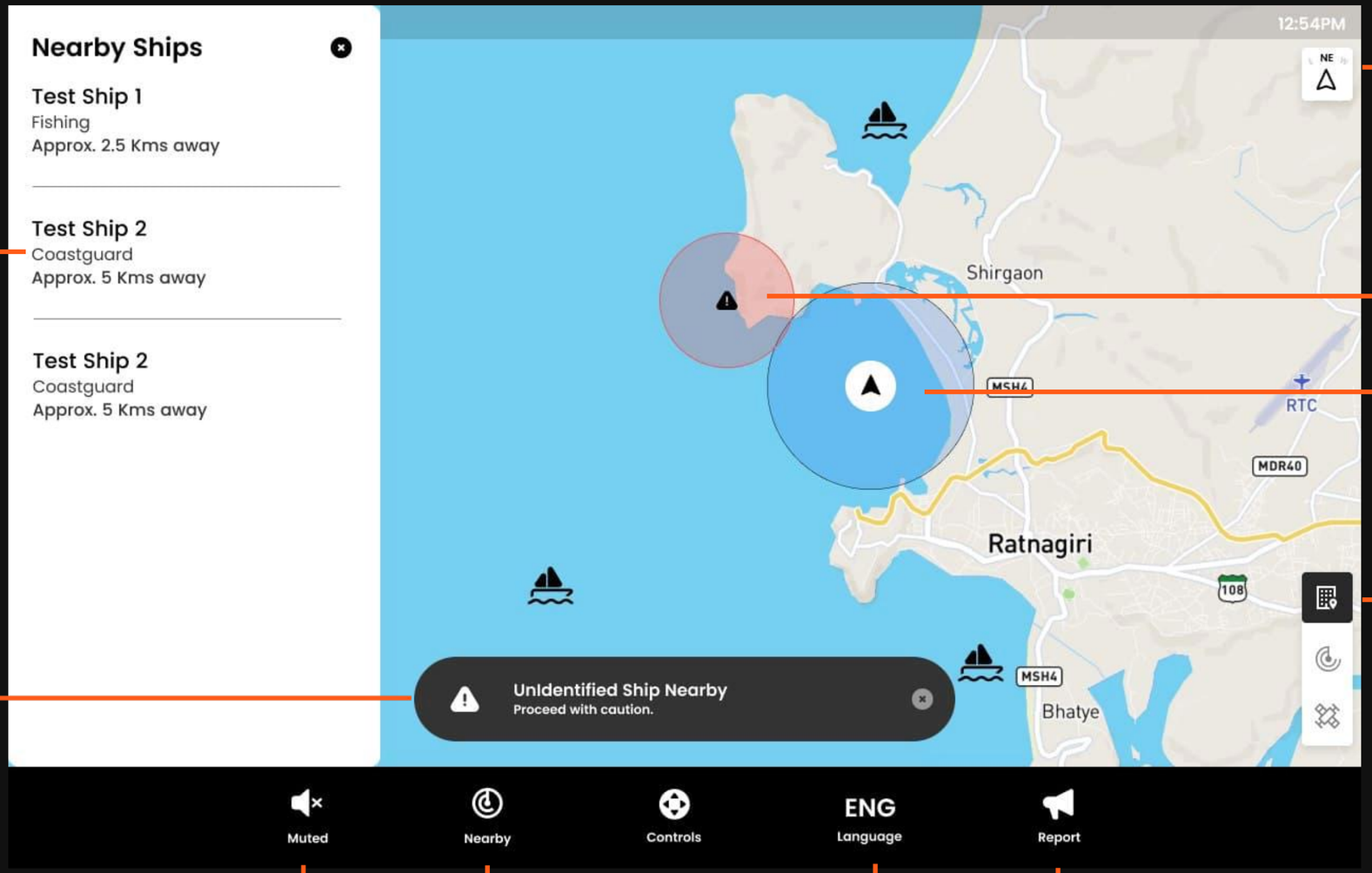

Nearby Ships Description

Compass Navigation

Suspicious/Unidentified Ship

User's Ship

Map Type

Warning Notification

Mute System

Nearby Ships Detection

Native Language Support

Report System

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Engineering Process

06

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Shipper

Takes data from API to **Plot it into the Shipper's map**

Provides location of a other ship in range

Coastal AIS Receiver

Switches traffic information to Radar or Satellite automatically based on situation

API

Receive signal from the Ships

Convert longitude & latitude from signal to JSON Data for API Consume

AIS Sensor & Radar

Detect & tracking Real-Time Location ships using Radar

Ships on Coastal Region

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Software Features

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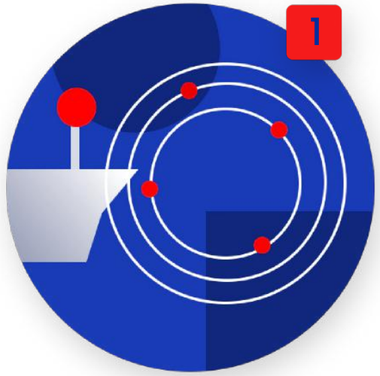
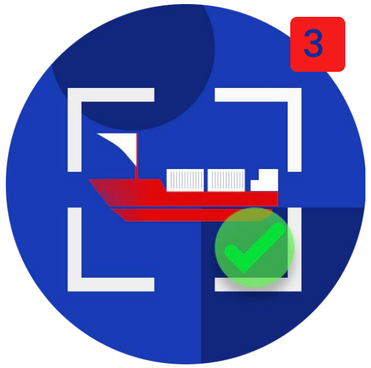
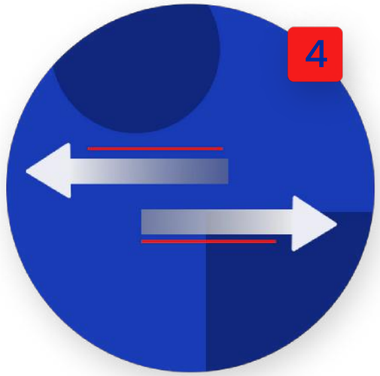


- Head-to-Head Collision Detection

- Suspicious Ships Report System



- Ship Detection using Satellite Imagery



- Automatic Data Source Switching

- Native Language Support

- Navigational Guide Services

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Technology Stack!

React.Js

PostgreSQL

Python

Socket.io

Mapbox

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“We may have all come on different ships. But we're in the same boat now”

—Martin Luther King,Jr

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And that brings us to the end.

Thank you so much for your time and attention

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