

# AGENTIC HACKATHON

## **PROBLEM STATEMENT:**

Overfishing Alert System

A real- time alert system that notifies authorities when overfishing thresholds are breached in specific zones.

**TEAM: QUANTUM CREW**

## **MEMBERS:**

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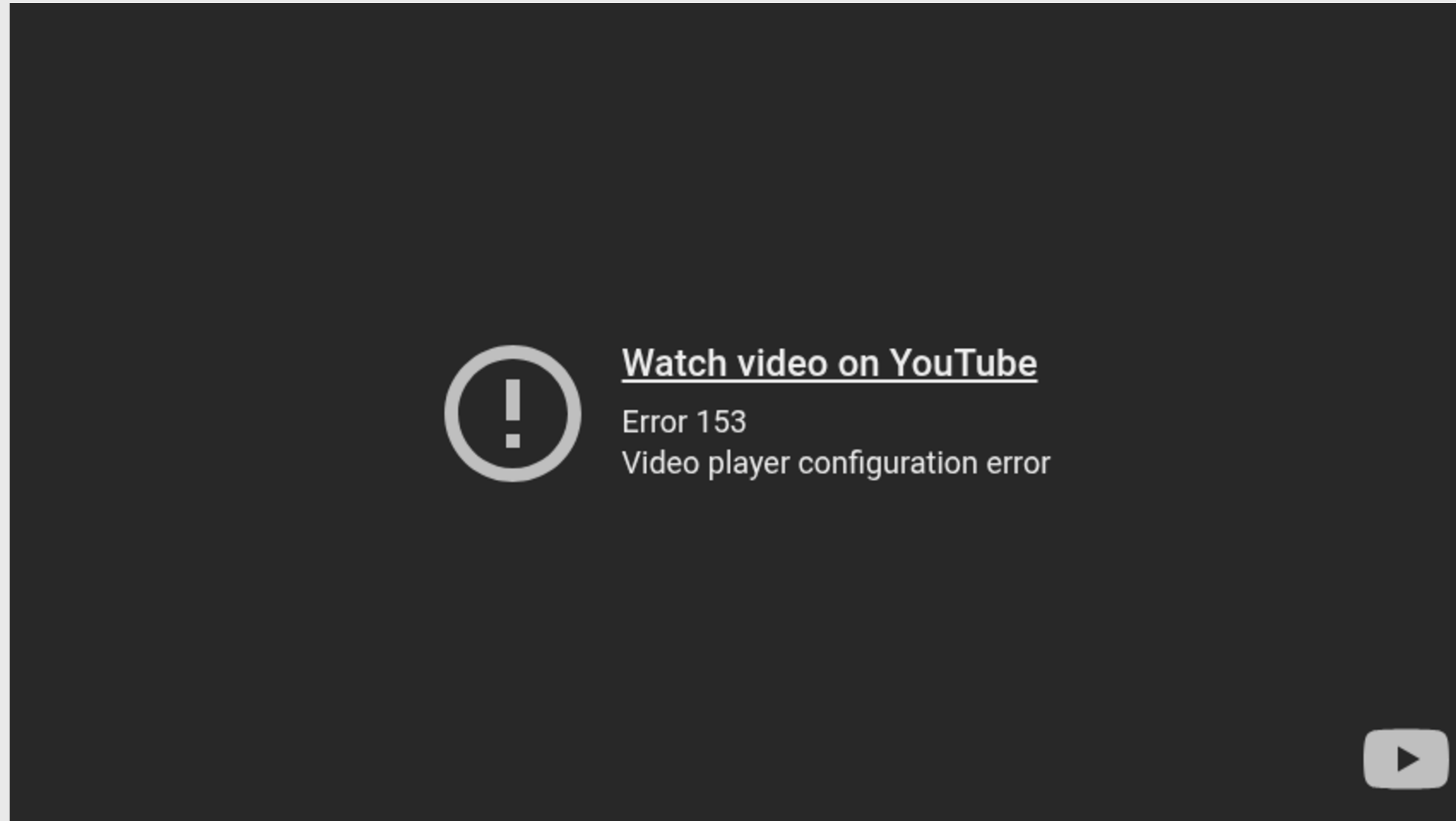
# Our Solution

- We are building a real time, zone-based alert system that monitors fishing activity and prevents overfishing in coastal waters
- Currently, there is no system that warns fishermen or authorities when fish are being overharvested in a particular area. This leads to stock collapse, economic loss and ecosystem damage
- We allow fishermen or inspector to log their daily fish catch by zone, weight and species.
- When total catch in a zone exceeds the limit our system
  1. Sends an overfishing alert
  2. Marks the zone as overfished
  3. Calculates CPUE to detect early warning signs
- The System displays this data in a simple live dashboard

## TECH STACK USED

1. Frontend-HTML,css,JavaScript,Bootstrap
2. Dashboard &UI Components-Chart.js,basic DOM scripting
3. Catch Data Storage-Firebase Realtime Database/Local JSON(for MVP)
4. Map Visualization-Google Maps (optional).
5. Hosting & Deployment-Github Pages or Netlify
6. CPUE Logic-Custom JavaScript logic(MVP),Python (scikit-learn) for AI extension.
7. Alert System - JavaScript logic(popups),future scope:Twilio API/Firebase Cloud Messaging
8. Authentication(Future Scope)-Firebase Auth/Role-based login system
9. Mobile Access(Future Scope) - Progressive Web App(PWA) + Offline Sync

# Youtube Demo Video



<https://youtu.be/7ITCmbSkD4I>

## **Business Analytics**

- Use Case: Role-based digital reporting system to monitor, report, and prevent overfishing.
- Impact: Enables real-time alerts, accountability, and sustainable practices.
- Market Opportunity: Targeting government fisheries departments, NGOs, and international coastal conservation programs. It also opens pathways for collaboration with marine research.
- Sustainability: Supports UN SDG 14 (Life Below Water), empowers local communities, and ensures long-term marine health.
- Scalability: Can evolve into a full ecosystem platform with IoT integration, predictive analytics, and AI-based pattern detection.