



**SMART INDIA
HACKATHON
2022**

Basic Details of the Team and Problem Statement

Ministry/Organization Name: Ministry of Home Affairs

PS Code: SIH1505

Problem Statement Title: Aerial Location of Hazardous Atmosphere in Industries

Team Name: EcoWarriors

Team Leader Name: Mr. Rahul Sanjay Tetwar

Institute Code (AISHE): C-34399

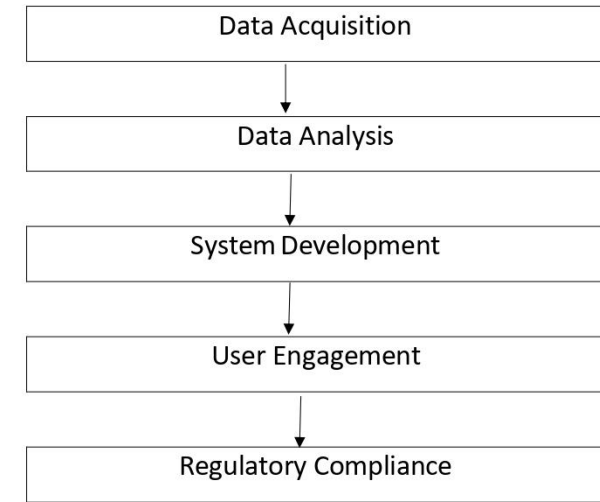
Institute Name: Maharashtra Institute of Technology, Chh.Sambhajnagar

Theme Name: “Where Nature Meets Pixels”

Idea/Approach Details

Amid rising industrialization, effective fire prevention is crucial to protect lives and assets. This presentation delves into the role of aerial location in identifying hazardous atmospheres within industries, vital for comprehensive fire prevention.

- **Aerial Technology Utilization:** Employ aircraft or drones to survey industrial areas for hazard identification.
- **Precise Hazard Identification:** Locate flammable, toxic, and threat areas within the facility.
- **Advanced Techniques:** Use remote sensing, data analysis, and geospatial technology for data collection and mapping.
- **Hazard Zone Maps:** Create maps categorizing areas into flammability, toxic, and threat zones.
- **Fire Pre-Plans:** Develop proactive strategies to prevent fires and manage emergencies.
- **Enhanced Safety:** Improve safety and emergency response preparedness.
- **Economic Loss Reduction:** Minimize potential economic losses resulting from industrial fires.



Technology Stack :



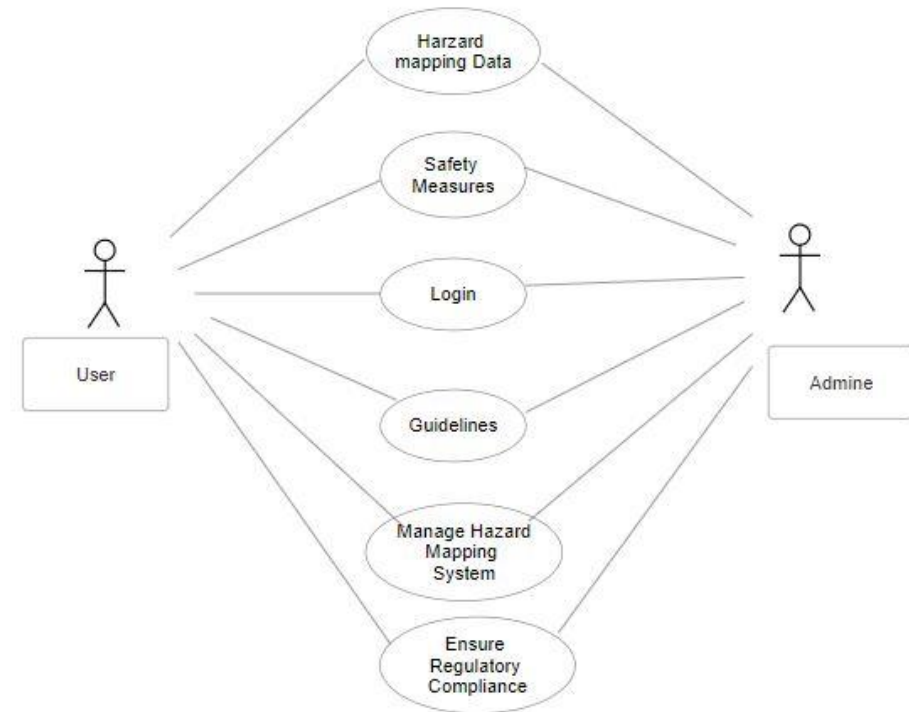
Idea/Approach Details

Use Cases :

- **Industrial Safety:** Enhance workplace safety by proactively managing fire and safety risks.
- **Emergency Response:** Aid first responders in minimizing risks during fire emergencies.
- **Environmental Protection:** Identify and contain environmental threats to prevent hazards.
- **Regulatory Compliance:** Ensure adherence to safety regulations and demonstrate commitment to public safety.
- **Preventive Maintenance:** Mitigate risks through timely maintenance measures.
- **Urban Planning:** Safely integrate industrial areas into urban landscapes.
- **Insurance Assessment:** Accurately assess and underwrite policies based on hazard mapping data.
- **Environmental Impact Studies:** Conduct research and address environmental impacts associated with industrial activities.

Show Stopper :

- **Data Accuracy:** Ensure precise data for effective risk assessment.
- **Technology Reliability:** Dependable aerial equipment is essential for uninterrupted mapping.
- **Privacy Concerns:** Address privacy issues and adhere to regulations.
- **Data Security:** Protect collected data from unauthorized access.



Team Member Details

Team Leader Name : Mr. Rahul Sanjay Tetwar

Branch : MCA

Stream : Computer Science

Year : II

Team Member 1 Name : Mrs. Akankasha Atul Kasar

Branch : MCA

Stream : Computer Science

Year : II

Team Member 2 Name : Mr. Pranjali Shankar Jadhav

Branch : MCA

Stream : Computer Science

Year : II

Team Member 3 Name : Mr. Prajwal Mohan Chapke

Branch : MCA

Stream : Computer Science

Year : II

Team Member 4 Name : Mr. Govind Madan Ambade

Branch : MCA

Stream : Computer Science

Year : II

Team Member 5 Name : Mr. Vedant Vivek Koleshwar

Branch : MCA

Stream : Computer Science

Year : II

Team Mentor 1 Name: Dr. Shubhashree Savant

Category⁴ : Academic

Expertise : Medical Image Processing , AI and Programming

Domain Experience : 10 years