Hackathon: AI for Environmental Safety

1. Hackathon Phases:

Phase 1: Understanding the Problem (Research & Ideation)

- Teams will explore **key environmental safety challenges**, such as:
    - Air and water pollution monitoring
    - Deforestation detection
    - Waste management optimization
    - Climate change impact assessment
    - Disaster risk prediction (e.g., floods, wildfires)
- Participants will research existing solutions and identify gaps.
- Each team must **formulate a problem statement** and submit a **brief idea proposal.**

Phase 2: Data Collection & Preprocessing

- Teams will collect or scrape publicly available **environmental data** (e.g., satellite images, weather patterns, pollution levels, deforestation rates).
- Teams should ensure **compliance with ethical data collection practices.**
- Basic **data cleaning and preprocessing** should be performed to make the dataset usable for AI models.
- The dataset must contain a **minimum of 1,000 data points** to ensure meaningful analysis.

Phase 3: Applying Baseline Models

- Teams will apply **basic AI/ML models** to analyze their data (e.g., pollution level forecasting, climate trend analysis, waste detection using computer vision).
- The focus should be on **demonstrating proof-of-concept rather than high model accuracy.**
- Pre-trained models can be used if necessary.

Phase 4: Presentation & Evaluation

- Teams will present their findings and ideas in a **5-10 minute pitch.**
- The presentation should cover:
    - **Problem statement & significance**
    - **Data collection & preprocessing process**
    - **AI model & findings**
    - **How the solution contributes to environmental safety**

    - **Future improvements & scalability**
- Judges will evaluate based on **clarity, innovation, feasibility, and impact.**

2.Rules & Guidelines:

- **Originality:** The idea must be original and not a direct copy of an existing solution.
- **Data Ethics:** No private or sensitive data should be collected without consent.
- **Use of Pre-trained Models:** Allowed, but teams should clearly explain their role in the project.
- **Collaboration:** Teams must work independently; external mentorship is allowed but should be disclosed.
- **Presentation Format:** Each team must prepare a **slide deck (maximum 10 slides)** and a **live demonstration (if applicable).**

3. Judging Criteria:

Criterion	Description	Weight
Innovation	Uniqueness and creativity of the idea	30%
Impact	Potential effectiveness in improving environmental safety	25%
Feasibility	Practicality and scalability of the solution	20%
Execution	Quality of data collection and AI application	15%
Presentation	Clarity and effectiveness of communication	10%