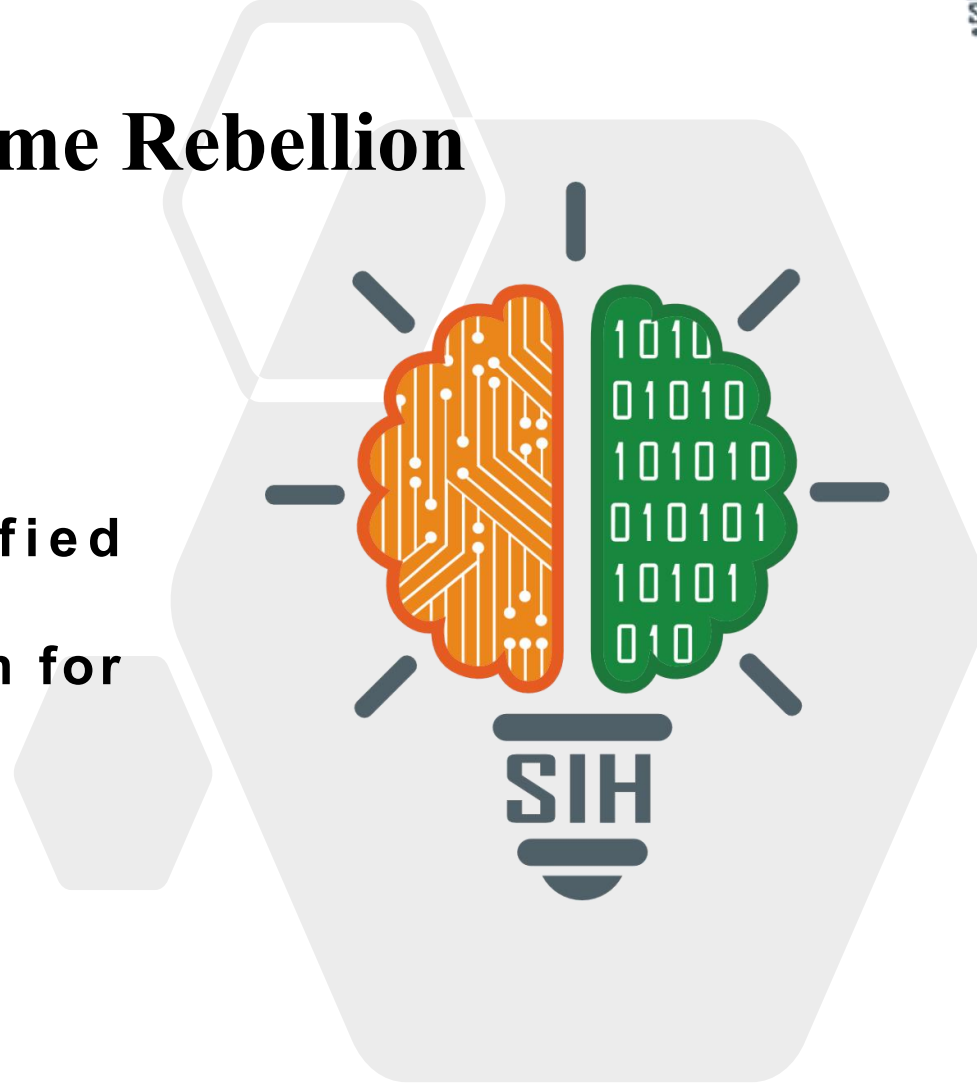


# SMART INDIA HACKATHON 2025



## ECR-Eco Crime Rebellion

- Problem Statement ID –25009
- Problem Statement Title-Gamified Environmental Education Platform for Schools and Colleges
- Theme-Smart Education
- PS Category- Software
- Team Name -Kop Creators



# ECR-Eco Crime Rebellion

## Proposed Solution: Eco Crime Rebellion (ECR)

- Large-scale open-world action-adventure addressing global environmental challenges.
- Dynamic world with cities, forests, and oceans plagued by eco-crimes (logging, poaching, toxic dumping, corporate exploitation).
- Missions: confront eco-crimes, expose corruption, and lead a rebellion for sustainability.

## How It Addresses the Problem

- Makes environmental issues exciting and engaging for youth.
- Player choices directly impact the world (clean or polluted, thriving or collapsing).
- Builds an emotional, interactive link to sustainability.

## Innovation & Uniqueness

- First eco-crime themed open-world narrative merging fun + awareness.
- Dynamic ecosystem engine reacting to every decision.
- Choice-driven storytelling with multiple outcomes.
- Scalable multiplayer where communities shape a shared environment.

## Technologies to be Used

- Game Engine: Unity 3D / Unreal Engine 5
- Programming: C# / C++ (game logic), Python (AI, NPCs)
- Frameworks: ML Agents, Photon/Netcode (multiplayer), AR/VR optional
- Graphics & Assets: Blender, Maya, Substance Painter
- Backend & Cloud: Firebase / AWS (data, saves, servers)
- Hardware: Cross-platform (PC, Console, Mobile), scalable rendering

## Methodology & Process

- Design: World map, eco-crime themes, story arcs
- Prototype: Core mechanics + Eco-Meter system
- Development: Environments, AI-driven NPCs, missions (heists, chases, sabotage)
- Integration: Multiplayer eco-gangs, cloud saves
- Testing & Deployment: Fun + awareness balance, scalable release with DLC/updates

## Mini-Prototype – Eco Runner

- Endless runner where players collect eco-items (seeds, water drops, recycling tokens) & dodge pollution obstacles.
- Core mechanics: eco-points instead of coins, obstacles (waste, trucks), power-ups (solar boost, recycling magnet).
- Tech: Unity 3D (C#), Blender assets, Android/iOS deployment.
- Purpose: Engaging demo proving eco-awareness can merge with fun gameplay; scalable toward ECR's AAA scope.

## Feasibility

- Growing demand for open-world action-adventure games.
- Rising interest in impactful, socially relevant gaming.
- Scalable with Unity/Unreal + cloud tech, feasible at prototype & AAA levels.
- Dual value: entertainment + awareness for broad audiences.

## Challenges & Risks

- High cost & long dev cycles.
- Balancing fun with awareness (avoiding “educational” feel).
- Technical complexity (large maps, AI eco-systems).
- Competition from major studios.

## Strategies

- Begin with mini-prototype (Eco Runner) → scale to AAA.
- Modular dev: core mechanics first, expand in phases.
- Cross-platform rollout (mobile → PC/console).
- Partnerships with NGOs/brands for funding & reach.
- Community-driven online mode to sustain engagement.

# IMPACT AND BENEFITS



## Potential Impact on the Target Audience

- Engages youth and gamers with an immersive and thrilling experience while subtly raising awareness about environmental crimes.
- Encourages critical thinking and responsibility by linking in-game choices to visible environmental outcomes.
- Inspires curiosity about sustainability, green innovation, and collective action in an entertaining way.

## Benefits of the Solution

- Social:
  - ☐ Creates awareness among younger generations through entertainment.
  - ☐ Promotes community collaboration via multiplayer eco-rebellion features.
- Economic:
  - ☐ Scalable as a franchise with strong market appeal in gaming and edutainment sectors.
  - ☐ Opens opportunities for partnerships with eco-tech companies, NGOs, and educational institutions.
- Environmental:
  - ☐ Provides a virtual model of real-world eco-challenges and solutions.
  - ☐ Encourages eco-friendly behaviors by rewarding sustainable actions in gameplay.
  - ☐ Acts as a digital advocacy tool for climate action and anti-pollution campaigns.

## Gaming Industry & Trends

- [Newzoo Global Games Market Report 2025](#)
- [Statista – Video Game Industry Overview](#)

## Environmental Challenges & Awareness

- [UN Environment Programme \(UNEP\) – Resources](#)
- [World Wildlife Fund \(WWF\) – Deforestation](#)
- [IPCC – Climate Change Sixth Assessment Report \(AR6\)](#)

## Game Development & Technology

- [Unity Documentation](#)
- [Unreal Engine Documentation](#)
- [Photon Engine – Multiplayer Framework](#)

## Inspiration from Serious Games

- [Games for Change – Impact Games](#)
- [Springer – Gamification & Sustainability Research](#)