



# 1. Smart Attendance: Building Intelligent Solutions for Field Operations

This hackathon challenges participants to develop cutting-edge, AI-powered attendance tracking solutions designed for the complexities of mobile work environments. In field operations, traditional attendance methods are often inefficient, prone to errors, and difficult to scale in dynamic, mobile environments. These methods can lead to inaccurate attendance data, poor visibility into workforce availability, and increased administrative overhead. Participants will address practical challenges such as Extreme Weather Conditions, Sweaty Palms or Dry Skin, Remote Locations, High Workforce Turnover, Lack of IDs or Uniforms and Large Workforces. Whether it's construction, agriculture, field services, or remote teams, the goal is to create intelligent software applications that address the limitations of traditional attendance methods. By leveraging Artificial Intelligence (AI), participants will build systems that offer real-time, accurate workforce tracking, helping organizations improve productivity and streamline field operations.

## Key Objectives

- Enhance Accessibility
- Ensure Data Accuracy
- Provide Real-time Insights
- Streamline Integration
- AI-Powered Anomaly Detection

# 2. Creating a Sustainable Food Ecosystem: Harnessing Technology in Food and Agriculture

Food and agriculture co-operatives play a crucial role in strengthening rural economies, eradicating hunger, and ensuring food security. However, small-scale producers face numerous challenges, including limited market access, inadequate infrastructure, and a lack of financial inclusion. This hackathon invites participants to develop innovative software solutions that address these issues while leveraging emerging technologies like predictive analytics and machine learning to create lasting impact. By providing small-scale farmers with powerful tools to improve their operations, participants can help create a more sustainable, profitable, and inclusive food ecosystem.

## Sample Problem Statements

- **Reducing Food Waste:** Design a digital platform to connect local farmers, vendors, and consumers to minimize food wastage and optimize surplus distribution in Kerala.
- **Climate-Resilient Agriculture:** Build an app to help farmers monitor and adapt to Kerala's changing weather patterns for better crop planning and sustainability.

## 3. Protecting Our Planet: Hacking for Environmental Sustainability

This hackathon invites participants to harness the power of technology and artificial intelligence (AI) to solve pressing environmental challenges. As the planet faces unprecedented levels of pollution, habitat destruction, and climate change, the need for innovative solutions to safeguard natural resources and ensure sustainable practices has never been more urgent. By developing tech-driven solutions, participants will contribute to reducing environmental impacts, promoting sustainability, and fostering eco-conscious communities. By leveraging technology, participants can explore ways to help reduce their carbon footprint, promote sustainable practices, and build resilient ecosystems for their communities.

## Sample Problem Statements

- **Efficient Waste Management:** Create a smart waste management solution for urban Kerala that encourages recycling and segregation at the household level.
- **Sustainable Tourism:** Develop a tool to promote eco-friendly tourism in Kerala's backwaters, ensuring minimal environmental impact while supporting local communities.

## 4. Platform Initiatives / Digital Platforms

Platform initiatives are businesses owned and managed by their members—workers, users, or a mix of both. Unlike traditional platforms, these initiatives share the benefits of digital tools and services among the community. The focus is on democratizing technology and building collective wealth, which resonates with Kerala's strong tradition of community-driven enterprises.

## Sample Problem Statements

- **Fairbnb for Kerala:** Design a platform where homestays and eco-friendly accommodations in Kerala's rural areas are collectively managed by hosts. This ensures profits stay within the community while promoting ethical tourism.
- **Digital Marketplace for Fishermen:** Create a platform to connect Kerala's fishing communities directly with consumers, ensuring fair prices and bypassing intermediaries.
- **Skill-Sharing Commons for Women Entrepreneurs:** Design a platform for women entrepreneurs in Kerala to exchange skills, mentorship, and resources while collectively managing and profiting from the initiative.