HackCrux Problem Statements

Problem Statement 1

Title: AI-Powered Digital Twin for Productivity Automation

Description: Develop a web platform that creates an AI-powered digital twin, learning from a user's browsing habits, communication style, and decision-making patterns. The AI clone mimics the user's tone and writing style using NLP and Reinforcement Learning, adapting over time. It automates daily tasks such as generating context-aware email replies, summarizing news and emails based on user interests, managing calendars by scheduling meetings and setting reminders, and acting as a research assistant by filtering relevant content and providing actionable insights. This solution enhances productivity by streamlining communication, scheduling, and information management.

Problem Statement 2

Description: Real-Time Disaster Information Aggregation

Problem Statement: Develop a software solution that automatically gathers and categorises disaster-related data from social media, news portals, and open sources. Using advanced algorithms, the system should filter relevant information and present it on a user-friendly dashboard for disaster response agencies. This real-time aggregation will enhance situational awareness, streamline response efforts, and improve decision-making, ultimately saving lives.

Problem Statement 3

Title: Waste-to-Energy: Smart Waste Management & Recycling

Description: Develop an innovative waste management solution to reduce landfill waste, lower greenhouse gas emissions, and promote recycling. The system should integrate digital tracking for waste collection and recycling, enabling municipalities to monitor waste flow efficiently. Additionally, implement community-driven waste recycling methods, including torrefaction of municipal solid waste (MSW) into bioenergy pellets and landfill gas (LFG) collection for renewable energy generation. The goal is to create net-zero waste communities through sustainable and technology-driven solutions.

Problem Statement 4

Title: Smart Irrigation System for Precision Farming using IOT / Open Innovation

Description: Design an IoT-powered smart irrigation system that monitors soil moisture and weather conditions in real-time. The system should provide farmers with data-driven irrigation recommendations via a mobile application, ensuring optimal water usage and improved crop yields. Integrating moisture sensors and automated alerts, this solution will help combat water scarcity and enhance agricultural efficiency.

Note: In Open Innovation, you are free to solve any real-life problem—it is not limited to IoT or Smart Irrigation System. For other problem statements, the topics are fixed. However, when submitting your Open Innovation PPT, be sure to include your project title before submission.

Still have doubts?
Feel free to join our community—we're here to instantly help you with your doubts! Also, here is our contact information: +91 9685759324

Rules

You are supposed to submit your presentation in a PDF format named TeamName.pdf

Instructions for the presentation:

***Note*:** Adhere to the format of the presentation. You are supposed to not exceed a maximum of 10 slides. Remember, the clearer your presentation, the better your chances of getting selected for the final round.

Slide Structure:

- **Title:** Include Team Name, Members' Names, Contact Info, and Selected Problem Statement.
- **Problem Overview:** Clearly state the chosen problem with background, significance, and impact on users/industry.
- **Analysis:** Explain key challenges and pain points, supporting your analysis with research or data.
- **Proposed Solution:** Describe your innovative approach, outline the technologies (web frameworks, APIs, cloud services) you'll use, and show the anticipated user impact.
- **Roadmap & Plan:** Present a clear timeline with milestones (planning, development, testing) and summarize your methodology.