SRKR ENGINEERING COLLEGE::BHIMAVARAM

SRKR CODING CLUB

HACKOVERFLOW-2K24

PROBLEM STATEMENTS

AGRICULTURE:

1. **Block chain-Based Supply Chain for Agriculture:** Develop a decentralized application using block chain to ensure transparency in the agriculture supply chain. The platform will allow farmers to track the journey of their produce from farm to market, ensuring authenticity and fair pricing. It will also provide real-time updates on crop prices and demand forecasts.

2. **AI-Powered Crop Disease Detection App:** Build a mobile application where farmers can upload pictures of their crops, and AI analyzes the image to detect diseases, recommend treatments, and suggest preventive measures. The app should integrate offline functionality for rural areas with poor internet connectivity.

3. **Smart Irrigation System with IoT and Web Dashboard**: Design a smart irrigation system using IoT sensors to measure soil moisture levels and weather forecasts. The system should optimize water usage and allow farmers to monitor and control irrigation from a web or mobile dashboard.

4. **Real-Time Market Price Tracker for Farmers**: Create a web or mobile app that tracks real-time market prices for various crops and provides recommendations on the best time and place to sell, helping farmers maximize their profits. Use API integration to pull data from multiple markets and block chain for secure transactions.

5. **Digital Education Platform for Farmers using AI and Local Languages**: Develop a web-based platform that provides educational resources and training for farmers in regional languages. The platform will use AI to personalize learning paths based on the farmer's current crop, season, and challenges, providing localized advice on best practices and techniques.

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HEALTH CARE:

1. **Chronic Disease Management Platform**: Create an application designed for the long-term management of chronic diseases like diabetes and hypertension. This platform would allow patients to track their health metrics, receive personalized treatment recommendations, and connect with healthcare providers for regular updates.

2. **AI-Driven Preliminary Diagnosis Tool for Dermatology**: Develop an AI-powered tool that allows patients to input images of skin issues. The tool will analyze the images, provide a preliminary diagnosis of dermatological conditions, and suggest potential treatments or a follow-up with a specialist.

3. **Real-Time Hospital Inventory Management**: Build a system that uses IoT sensors and AI to streamline inventory management in hospitals. This solution will provide real-time visibility of medical supplies, reduce manual effort, and help healthcare workers quickly locate and restock necessary items, improving operational efficiency.

4. **Medication Adherence and Reminder System**: Build a mobile or web app that helps patients manage their medication schedules by sending reminders, tracking medication adherence, and providing detailed information about the medicines they are prescribed. The system should integrate with hospital databases to allow healthcare providers to monitor patient compliance.

5. **Block chain-Based Blood Donation and Supply Chain Management**: Develop a block chain-powered system to track and manage the entire blood donation process—from donor registration to blood collection, storage, and distribution. The platform should ensure transparency, traceability, and security, allowing hospitals to monitor blood stock levels in real-time, trace the origin of donations, and match donors with patients in need more efficiently, reducing wastage and shortages.

WOMEN AND CHILD SAFETY:

1. **AI-Driven Cyberbullying and Online Harassment Detection Tool**: Build an AI-based tool that monitors social media interactions for children and teenagers, detecting patterns of cyberbullying or online harassment. The tool should send alerts to parents or guardians when harmful behavior is identified and provide resources for emotional support, including ways to report incidents anonymously.

2. **VR-Based Safety Training for Women and Children**: Develop a VR (Virtual Reality) platform that provides immersive safety training for women and children. The platform can simulate real-world scenarios such as navigating public spaces, identifying threats, and practicing self-defense techniques. This would help empower young people by building awareness and confidence in managing potentially dangerous situations.

3. **Smart Wearable for Women Safety with Emergency Alert System**: Design a smart wearable (like a bracelet or pendant) equipped with a hidden emergency alert system. In case of an unsafe situation, the women can discreetly press a button to send an SOS message with her real-time location to family members, nearby authorities, and emergency services, ensuring rapid response.

4. **Child Safety Tracker with Geofencing**: Develop an app that uses geofencing and real-time location tracking to alert parents or guardians when children enter or leave designated safe zones (e.g., schools, parks, homes). The app can also send SOS alerts to trusted contacts if the child goes outside safe zones unexpectedly or is in distress.

5. **Voice-Activated Emergency App for Women**: Develop a voice-activated mobile app that allows women to trigger emergency alerts without needing to physically unlock their phone. The app would be integrated with a voice assistant and activated by specific keywords to send real-time location and distress signals to emergency contacts, nearby police, or safety authorities. This allows for discreet action in situations where women might be unable to physically access their phone.