ACROPOLIS
Enlightening Wisdom

acm AITR ACM
Student Chapter

AITR acm-w

‹प्रयत्न 2.0›

ATTEMPT ‹› INNOVATE ‹› SUCCEED

Problem Statements
2025

Artificial Intelligence

AI for Personalized Learning in Rural Education :
How can AI platforms provide personalized learning for rural Indian students, using NLP and adaptive learning to overcome language barriers and lack of qualified teachers?

AI for Crop Yield Prediction and Supply Chain Optimization :
How can AI predict crop yields using real-time environmental data and optimize agricultural logistics to reduce wastage, costs, and ensure fair pricing in India?

AI for Real-Time Air Quality Monitoring in Urban Areas :
How can AI create a real-time air quality monitoring system for Indian cities, using IoT and satellite data to predict pollution and recommend solutions?

AI for Heritage Digitization and Craft Preservation :
How can AI digitize and catalog India's traditional crafts using computer vision and 3D modeling to preserve them and create virtual marketplaces for artisans?

AI-Based Diagnostic Tools for Remote Healthcare in Rural India :
How can AI diagnostic systems be developed for rural clinics to detect diseases like tuberculosis and malaria using mobile devices and telemedicine for timely treatment?

App Development

Augmented Reality for Urban Planning :
Build an app that allows urban planners to use AR to visualize city changes (e.g., new buildings, roads) in real-time, helping them make informed decisions about urban development.

Decentralized Internet Access for Remote Areas :
Develop an app that creates a decentralized network (using peer-to-peer connections) to provide internet access to underserved and rural communities, eliminating reliance on centralized infrastructure.

Smart Inventory Management for Small Businesses :
Build an app that uses AI to track and optimize inventory management for small businesses, reducing waste and improving supply chain efficiency, and offering real-time alerts for stockouts for e-commerce sites

Supporting Individuals with Invisible Disabilities :
Design a tech-driven solution for individuals with invisible disabilities like ADHD, autism, or chronic pain. Focus on improving daily life, fostering inclusivity, or enhancing independence using tools like AI, IoT, or gamification. How can your innovation empower them while promoting greater understanding in society?

Web Development

Zero-Waste Recipe Generator :
Build a web-based recipe generator that suggests meals based on leftover ingredients, integrates meal planning, and connects with local food donation drives to promote sustainability.

Collaborative Whiteboard Tool :
Develop an AI-powered collaborative whiteboard tool for remote teams that supports real-time drawing, writing, voice, and video integration, along with features like automatic thought organization, content summarization, and AI-based topic suggestions, while enabling cloud-based storage for seamless team collaboration.

Voice-Activated Website for Accessibility :
Design a website with voice recognition to enable hands-free interaction for users with limited mobility, including features like voice-activated scrolling and form input.

Board Room Interview Simulation :
Design a web-based Selector-Applicant Simulation Software that mimics a boardroom interview, starting with ice-breakers and progressing to techno-managerial questions based on the candidate's expertise.

Cyber Security

Data Breach Detection Tool :
Develop a real-time tool using AI to monitor database activity, detect breaches, and take immediate action to secure sensitive information.

Game Hacking Detection Solution :
Design a solution to detect and prevent hacking in online games by analyzing player behavior and in-game data for suspicious activities like aimbots or speed hacks.

Insider Threat Detection System :
Create a system to monitor employee activities and detect potential insider threats without violating privacy.

Phishing Email Detection :
Develop a system to detect phishing emails by analyzing signs like suspicious links and sender inconsistencies, providing alerts to users.

Secure Communication Platform :
Build a messaging platform with end-to-end encryption, ensuring no data is stored on servers and only the intended recipient can decr ypt messages.

Blockchain

Fake Product Detection via Barcode System :

Develop a blockchain-based system using barcodes/QR codes to track product authenticity. The system stores product details like origin and ownership on the blockchain. Users can scan codes to access data, while smart contracts manage product information and an admin portal allows manufacturers to register products. IPFS ensures secure data storage.

Blockchain-based Medical Report Management:

Develop a blockchain-based system to securely store and manage medical reports, giving patients control over their data. Patients can upload, manage, and share reports with authorized doctors. Smart contracts handle access permissions, IPFS ensures secure storage, and blockchain provides an immutable audit trail for transparency and security.

Insider Threat Detection System :

Develop a blockchain-based system for booking transport services and earning loyalty points. Users can securely track and redeem points, while transport providers list their services. A wallet interface allows users to manage rewards, and blockchain ensures the transparency and security of all booking and reward transactions.