Sr. No.	Problem Statement Title	Problem Statement Description	Background	Expected Solution	Theme	Category Group
1	Vernacular Chatbot for Mental Health Triage for College Students in Urban India	Develop an LLM-based chatbot that offers initial mental health support in multiple Indian languages (Hindi, Tamil, Bengali). The system should be able to identify signs of severe distress, provide coping mechanisms for mild anxiety, and guide users to professional help. It must maintain user anonymity and data privacy.	Mental health is a growing concern among Indian youth, with stigma and lack of access to professionals being major barriers. A vernacular, anonymous first-point-of-contact can encourage more students to seek help before their issues escalate. A 2021 UNICEF report noted that only 41% of young people in India believed it was good to get support for mental health problems.	A web-based chatbot interface. The backend should use a fine-tuned LLM (like Llama 3 or a Gemini model via API) for conversational AI. The prototype should demonstrate a conversation flow for identifying anxiety, offering a simple guided breathing exercise, and providing a static list of verified mental health resources. Focus on the NLP and conversation design.	Healthcare & Life Sciences	Software / AI
2	AI Tool for Creating Hyper-localised Public Health Awareness Campaigns in Rural India	Create a GenAI-powered platform that generates posters, social media captions, and short video scripts for health campaigns (e.g., vaccination drives, sanitation awareness) in any language. The tool should allow workers to input a topic and target village, and it will generate culturally relevant and easy-to-understand content.	Public health messaging often fails to resonate in rural areas due to language and cultural gaps. Generic, top-down campaigns are less effective than hyper-localised content. Empowering local health workers with tools to create their own materials can significantly improve community engagement and health outcomes.	A simple web interface with a form for inputting campaign topic, target audience, and desired output (poster, script). Use a multimodal model API (like Gemini) to generate both text and an image prompt for a poster. The prototype should showcase the generation of one poster concept and a short WhatsApp-friendly message in Marathi.	Healthcare & Life Sciences	Software / AI
3	Gamified Physiotherapy Assistant for Post-Stroke Patients at Home	Design a mobile application that uses a phone's camera and computer vision to monitor and guide physiotherapy exercises for stroke survivors. The app should provide real-time feedback on form, count repetitions, and use gamification (points, badges) to motivate patients. It should have a simple interface for elderly users.	In India, over 1.8 million people suffer from strokes annually. Consistent physiotherapy is crucial for recovery but is often hampered by cost and access to therapists. An AI-powered home assistant can provide affordable, daily guidance, improving patient adherence and recovery speed, especially for those in remote areas.	A mobile app prototype (can be a web app for the hackathon) that uses a library like MediaPipe or TensorFlow.js for pose estimation. The prototype should be able to track the angle of an arm raise exercise, provide simple visual feedback ('Raise higher', 'Good job'), and show a score at the end of a session. Focus on one specific exercise.	Healthcare & Life Sciences	Software / AI
4	Predictive AI Model for Dengue Outbreak Hotspots in Indian Tier-2 Cities	Develop a machine learning model that predicts potential dengue outbreak hotspots within a city like Coimbatore. The model should use publicly available data such as weather patterns (rainfall, humidity), sanitation reports, population density, and historical outbreak data to generate a weekly risk map.	Dengue is a recurring health crisis in many Indian cities, overwhelming healthcare systems. Proactive measures like targeted fogging and public awareness campaigns are more effective and cost-efficient than reactive responses. An accurate prediction model can help municipal corporations allocate resources effectively and prevent large-scale outbreaks.	A Python-based backend (Flask/FastAPI) that processes sample datasets (can be mocked for the hackathon). The core of the prototype is the trained ML model (e.g., using XGBoost or a Random Forest) that outputs risk scores for different city zones. The output can be visualized on a simple web page using a library like Folium or Mapbox to color-code zones based on risk.	Healthcare & Life Sciences	Software / AI
5	Diet and Nutrition Planner for Managing Diabetes in the South Indian Population	Create a web application where users can get personalized weekly diet plans tailored to South Indian cuisine for managing Type 2 diabetes. The LLM should consider user preferences, local availability of ingredients, and glycemic index to generate healthy, affordable, and culturally appropriate meal plans.	India has over 77 million diabetics, and diet management is key. Generic diet advice often ignores regional culinary habits, leading to poor adherence. A tool that understands and incorporates staples like dosa, idli, and sambar in a healthy way can significantly improve outcomes for the large diabetic population in South India.	A web interface where a user enters basic details (age, activity level, food preferences). This input is used to construct a detailed prompt for an LLM API (e.g., Gemini). The prototype should parse the LLM's text response and display a structured meal plan. The focus is on effective prompt engineering and clear presentation of the output.	Healthcare & Life Sciences	Software / AI
6	Blockchain-based Cold Chain Monitoring and Traceability for Vaccine Distribution in India	Develop a system that uses blockchain and IoT sensors to track the temperature and location of vaccine shipments from the manufacturer to the rural clinic. The data is recorded on an immutable ledger, ensuring transparency and accountability, and preventing the use of spoiled vaccines.	Maintaining the cold chain for vaccines is a massive logistical challenge in India, leading to wastage and reduced efficacy. A transparent, tamper-proof system can build trust and ensure that vaccines administered in remote areas are safe and effective, which is critical for national immunization programs.	A simulated dashboard view for a health official. The prototype will not use real IoT devices but will have a script that mimics sensor data (temperature, GPS) being sent to a smart contract on a testnet (e.g., Polygon Mumbai). The dashboard should query the blockchain to display the historical temperature log and current location of a fictional vaccine batch.	Healthcare & Life Sciences	Software / Blockchain
7	Decentralized Platform for Secure Sharing of Patient Health Records using Blockchain	Create a blockchain-based system that allows patients to own and control access to their electronic health records (EHRs). Patients can grant temporary, auditable access to doctors, hospitals, or insurance companies using a decentralized identity system.	Patient health records are fragmented across multiple hospitals and clinics, leading to incomplete medical histories and redundant tests. Centralized systems are vulnerable to data breaches. A patient-centric, blockchain-based system enhances privacy, security, and interoperability, allowing for a holistic view of a patient's health.	A web application with two interfaces: a patient dashboard and a doctor's view. The prototype should use a decentralized storage solution like IPFS to store encrypted (mock) health data. The blockchain would store permissions and access logs. A patient should be able to 'grant access' to a doctor, who can then view the (mock) record.	Healthcare & Life Sciences	Software / Blockchain
8	System for Tracking and Authenticating Pharmaceutical Drugs to Combat Counterfeiting	Design a supply chain solution where each strip or bottle of medicine is assigned a unique identity on a blockchain. At each point in the supply chain (manufacturer, distributor, pharmacy), the product is scanned, and the transaction is recorded. Consumers can scan a QR code to verify the drug's authenticity.	Counterfeit drugs are a multi-billion dollar problem in India, posing a severe risk to public health. A transparent and immutable tracking system can help stakeholders and consumers verify the genuineness of medicines, weeding out fakes from the supply chain and saving lives.	A mobile-first web app with three simple roles: Manufacturer, Pharmacist, and Consumer. The 'Manufacturer' can create a new drug entry on a testnet blockchain. The 'Pharmacist' can scan and mark it as 'sold'. The 'Consumer' can scan a QR code (which just contains the product ID) and view its journey from the manufacturer.	Healthcare & Life Sciences	Software / Blockchain

9	Real-time Air Quality Forecasting System for Major Indian Metros like Delhi and Mumbai	Develop an AI model that predicts hyperlocal air quality (AQI) for the next 24 hours. The model should use data from existing government sensors, satellite imagery (for dust storms, stubble burning), weather forecasts, and traffic data to provide more accurate and granular forecasts than currently available.	Air pollution is a silent killer in Indian cities, causing millions of premature deaths. Accurate, hyperlocal forecasts can help citizens, especially vulnerable groups (children, elderly, asthmatics), take precautions. It can also assist policymakers in implementing timely emergency measures like the 'Odd-Even' rule.	A backend service that pulls data from open-weather APIs and uses a pre-trained time-series model (like LSTM or Prophet) on a sample AQI dataset. The prototype should expose an API endpoint that, given a latitude/longitude for a location in Delhi, returns a predicted AQI for the next 3 hours. A simple web page can be used to call this API and display the result.	Sustainable Tech & Climate Solutions	Software / AI
10	Computer Vision Tool for Automated Waste Segregation in Urban Waste Management Facilities	Create a system that uses computer vision to identify and classify different types of waste (plastic, glass, paper, organic) on a conveyor belt. This can automate the manual sorting process in Material Recovery Facilities (MRFs), improving efficiency and the quality of recycled materials.	India generates over 62 million tonnes of waste annually, but only a fraction is properly segregated and recycled. Manual segregation is slow, hazardous, and inefficient. Automating this process can significantly increase recycling rates, reduce landfill burden, and create a cleaner environment.	A web application that simulates a conveyor belt with images of waste items passing by. The user can upload an image of waste (e.g., a plastic bottle, a banana peel). A trained CNN model (e.g., YOLOv5 or MobileNetV2) should classify the item and display the category. The prototype focus is on the model's accuracy for 4-5 waste categories.	Sustainable Tech & Climate Solutions	Software / AI
11	ESG Report Analysis and Greenwashing Detection Tool for Indian Corporations	Develop a tool that uses NLP and LLMs to analyze corporate Environmental, Social, and Governance (ESG) reports. The tool should extract key metrics, summarize sustainability initiatives, and flag vague or potentially misleading statements (greenwashing) by comparing claims against standardized frameworks.	As ESG investing gains traction in India, there is a growing risk of 'greenwashing' where companies make exaggerated or false claims about their sustainability efforts. An AI-powered tool can help investors, regulators, and activists scrutinize these reports more effectively and promote genuine corporate accountability.	A web application where a user can paste text from an ESG report. The backend should use an LLM API with a sophisticated prompt to perform tasks like: 1) Summarize the company's climate goals. 2) Extract specific data points (e.g., carbon emissions). 3) Rate the clarity of a statement on a scale of 1-5. The prototype should demonstrate these three functions on a sample text.	Sustainable Tech & Climate Solutions	Software / AI
12	AI Platform for Optimizing Rooftop Solar Panel Placement in Indian Residential Areas	Design a web tool that uses satellite imagery and machine learning to identify optimal rooftops for solar panel installation in a given locality. The model should analyze roof size, orientation, shading from nearby objects, and local solar irradiance data to estimate the potential energy generation and cost savings for a homeowner.	India has an ambitious target for rooftop solar but adoption is slow due to a lack of awareness and complex manual assessment processes. An automated tool can help solar companies identify promising leads and provide homeowners with quick, data-driven estimates, accelerating the transition to clean energy.	A web app using a mapping library like Leaflet or Mapbox. A user selects an area (e.g., a neighborhood in Bangalore). The backend would use a computer vision model on a static satellite image of that area to segment and identify suitable rooftops. The prototype would highlight these rooftops on the map and show a mock 'Potential kWh/year' value on click.	Sustainable Tech & Climate Solutions	Software / AI
13	Blockchain-based Platform for Trading Carbon Credits from Small-scale Reforestation Projects	Create a transparent marketplace on a blockchain for small farmers and community-led reforestation projects in regions like the Western Ghats to tokenize and sell their carbon credits. This allows them to directly connect with corporations looking to offset their carbon footprint, ensuring fair pricing and traceability.	Small-scale green projects often struggle to access the global carbon market due to high verification costs and lack of transparency. A blockchain platform can democratize access, reduce administrative overhead, and provide a direct, verifiable channel for climate finance to flow to grassroots initiatives.	A simple marketplace web interface. The prototype should have functionalities for a 'Project Owner' to register a project and 'mint' a certain number of carbon credit tokens (NFTs or fungible tokens) on a testnet. A 'Buyer' should be able to browse projects and purchase these tokens. The focus is on the smart contract logic for minting and transferring credits.	Sustainable Tech & Climate Solutions	Software / Blockchain
14	Decentralized Peer-to-Peer Energy Trading Platform for Residential Solar Power Producers	Develop a blockchain-based platform that enables households with rooftop solar panels to sell their excess electricity directly to their neighbors. Smart contracts would automate the metering, trading, and settlement process, creating a hyper-local energy grid.	In the current system, excess solar power is sold back to the grid at a low price. A P2P trading platform allows producers to get a better price and consumers to buy cheaper, greener energy. This incentivizes solar adoption and creates a more resilient, decentralized energy grid, reducing transmission losses.	A simulated dashboard for two users ('Producer' and 'Consumer') in the same building. The 'Producer' can input 'excess kWh' and set a price. The 'Consumer' can see the offer and 'buy' it. A smart contract on a testnet would handle the mock transaction, updating the balances of both users. The prototype doesn't need real-time data, but should demonstrate the transactional flow.	Sustainable Tech & Climate Solutions	Software / Blockchain
15	Fake News Detection and Source Verification System for Indian Vernacular Languages	Build a browser extension or a web tool that uses NLP to detect fake news and misinformation in Indian languages like Hindi and Telugu. The system should analyze the text for sensationalism, check the credibility of the source domain, and perform reverse image searches to verify accompanying media.	Misinformation spreads rapidly on social media platforms in India, often with dangerous real-world consequences. Automated detection tools are crucial, but most are designed for English. A robust vernacular solution can help curb the spread of fake news and promote media literacy among a wider audience.	A web page with a text box where a user can paste a news article URL or text. The backend should use an LLM or a classic NLP model (like Naive Bayes trained on a sample dataset) to classify the text as 'Likely Genuine' or 'Potentially Misleading'. It should also extract the source domain and check it against a static list of known fake news sites.	Finance & Security	Software / AI
16	Financial Literacy Tutor for Gig Economy Workers in Urban India	Create a WhatsApp-style chatbot that provides personalized financial advice to gig workers (e.g., delivery partners, cab drivers). The chatbot should use GenAI to explain concepts like budgeting, saving, insurance, and investment in simple, vernacular language, using relatable examples from their profession.	Gig workers in India often have irregular incomes and limited access to formal financial education, making them vulnerable to debt and financial instability. A personalized, on-demand financial tutor can empower them to make informed decisions and improve their long-term financial health.	A web-based chat interface. A user can ask questions like ""How can I save Rs. 5000 this month?"" or ""What is mutual fund?"". The backend uses an LLM API, with a system prompt that primes it to act as a financial literacy coach for Indian gig workers. The prototype should showcase 3-4 different conversational queries and their generated responses.	Finance & Security	Software / AI

17	AI-based Credit Scoring Model for Farmers in Rural India using Alternate Data	Develop a machine learning model to assess the creditworthiness of small-scale farmers who lack a formal credit history. The model should use alternative data points like crop patterns (from satellite imagery), weather data, market prices, and mobile phone usage patterns to generate a risk score.	Millions of Indian farmers are excluded from the formal credit system due to a lack of traditional financial data, forcing them to rely on predatory moneylenders. An alternative credit scoring model can help banks and microfinance institutions (MFIs) make better lending decisions, promoting financial inclusion and agricultural growth.	A backend service with a trained ML model (e.g., a Gradient Boosting model). The prototype should accept a JSON input with mock alternative data for a farmer (e.g., {""crop"": ""cotton"", ""rainfall_mm"": 600, ""phone_recharge_freq"": ""weekly""}). It should return a credit score (e.g., 750) and a recommendation ('Low Risk', 'High Risk'). No complex UI is needed.	Finance & Security	Software / AI
18	Computer Vision System for Real-time KYC Document Verification and Fraud Detection	Build a system that can instantly verify government-issued ID cards like Aadhaar and PAN cards from an uploaded image or a live camera feed. The system should use OCR to extract text, verify the information against standard formats, and use computer vision techniques to detect signs of tampering or digital forgery.	Manual KYC (Know Your Customer) processes are slow, error-prone, and susceptible to fraud. An automated system can help banks, fintech companies, and other institutions onboard customers faster and more securely, while reducing operational costs and improving compliance.	A web application that allows a user to upload an image of an Aadhaar card (a sample image). The backend should use an OCR library (like Tesseract.js or an API) to extract the name and number. It should then use computer vision checks (e.g., checking for face presence, hologram area) to give a 'Verification Score'. The prototype should focus on extracting text and one CV check.	Finance & Security	Software / AI
19	Blockchain-based Digital Identity and Skill Verification System for Blue-Collar Workers	Create a decentralized platform where vocational training institutes can issue verifiable digital certificates for skills (e.g., plumbing, electrical work) to workers. Workers can store these credentials in a digital wallet and share them with potential employers, who can instantly verify their authenticity on the blockchain.	The skills of blue-collar workers are often not formally certified, making it hard for them to prove their credentials and for employers to find reliable talent. A secure, tamper-proof digital identity and skill verification system can bridge this gap, improving employability and formalizing the informal labor market.	A web app with interfaces for an 'Institute', a 'Worker', and an 'Employer'. The 'Institute' can issue a skill credential (an NFT or a verifiable credential) to a 'Worker's' address on a testnet. The 'Worker' can view their credentials. The 'Employer' can input a worker's ID and view their verified skills.	Finance & Security	Software / Blockchain
20	Smart Contract-based Escrow System for Freelancers and SMEs in India	Develop a decentralized escrow platform that holds payments for freelance projects. The client deposits funds into a smart contract when a project starts. The funds are automatically released to the freelancer once the client marks the work as complete. A dispute resolution mechanism can be included.	Payment disputes are a major problem for freelancers in India, who often face delayed or defaulted payments. A smart contract-based escrow system automates the payment process, providing security and trust for both freelancers and their clients, and reducing the need for expensive intermediaries.	A web application where a 'Client' can create a project, define milestones, and deposit mock cryptocurrency into a smart contract on a testnet. A 'Freelancer' can accept the project. The prototype should allow the 'Client' to trigger a 'release payment' function, which then transfers the funds to the freelancer's wallet address.	Finance & Security	Software / Blockchain
21	Blockchain-based Chit Fund Management Platform for Increased Transparency and Security	Design a platform to manage informal savings groups (chit funds) using smart contracts. The platform automates the process of collecting contributions, conducting auctions for the prize pot, and recording payouts. All transactions are recorded on a blockchain, providing transparency and reducing the risk of fraud or mismanagement by the foreman.	Chit funds are a popular savings tool in India but are often plagued by fraud and lack of transparency. A blockchain-based system can bring trust and efficiency to this traditional financial instrument, making it a safer option for millions of small savers. The market size of chit funds in India is estimated to be around INR 1.5 trillion.	A simple web interface for a group of 5 simulated users. The smart contract (on a testnet) should manage the state of the chit fund (total pot, member contributions). The prototype should allow users to 'pay their installment' and have a simple 'auction' mechanism where users can bid. The contract should automatically determine the winner and transfer the pot.	Finance & Security	Software / Blockchain
22	Predictive Maintenance System for Machinery in Indian Small and Medium Enterprises (SMEs)	Create a system that uses sensor data (vibration, temperature) to predict potential failures in industrial machinery. This allows SMEs to schedule maintenance proactively, reducing unplanned downtime, minimizing repair costs, and increasing productivity.	SMEs form the backbone of Indian manufacturing but often cannot afford expensive industrial monitoring solutions. A low-cost, AI-powered predictive maintenance system can provide them with the same competitive advantages as larger corporations, improving their efficiency and profitability.	A dashboard that visualizes simulated real-time sensor data (e.g., a graph showing rising temperature). A backend ML model (e.g., an anomaly detection algorithm like Isolation Forest) should process this data stream. The prototype should trigger an alert ('Maintenance Required for Machine X') on the dashboard when the data crosses a predefined anomaly threshold.	Industry, Commerce & Logistics	Software / AI
23	Route Optimization and Delivery Scheduling for Hyperlocal Logistics in Tier-2 Cities	Develop a platform that optimizes delivery routes for a fleet of riders in a Tier 2 cities. The system should consider real-time traffic, delivery time windows, vehicle capacity, and order priority to generate the most efficient routes, reducing fuel consumption and delivery times.	Hyperlocal delivery is booming in India, but logistics in congested Tier-2 cities are complex. Manual route planning is inefficient. An AI-powered optimization engine can significantly improve operational efficiency, reduce costs for businesses, and ensure faster deliveries for customers.	A web application with a map interface. A user can input a list of delivery locations (addresses or coordinates). The backend should use a route optimization API (like Google OR-Tools or a simpler algorithm like the nearest neighbor heuristic for the prototype) to calculate and display the optimal route for a single delivery vehicle on the map.	Industry, Commerce & Logistics	Software / AI
24	Computer Vision-based Quality Control System for the Indian Textile Industry	Build a system that uses a camera and computer vision to automatically detect defects (e.g., stains, tears, weaving flaws) in fabric on a production line. The system should flag defective sections in real-time, improving quality control and reducing manual inspection efforts.	India's textile industry is a major economic contributor, but maintaining consistent quality is a challenge. Manual inspection is subjective and labor-intensive. An automated CV-based system can ensure higher quality standards, reduce waste, and enhance the reputation of Indian textiles in the global market.	A web application that simulates a moving fabric roll. The user can upload an image of a fabric swatch. A trained CNN model should analyze the image and draw a bounding box around any detected defects. The prototype should be able to identify 2-3 predefined types of defects from a set of test images.	Industry, Commerce & Logistics	Software / AI

25	Automated Customer Support Agent for E-commerce Platforms in Vernacular Languages	Create an AI agent that can handle customer queries for an e-commerce site in multiple Indian languages. The agent should be able to answer questions about order status, return policies, and product details by accessing a knowledge base and integrating with the company's backend systems.	As e-commerce penetrates deeper into India, providing customer support in regional languages is crucial. Automated LLM agents can provide instant, 24/7 support, reducing the workload on human agents and improving customer satisfaction for a diverse, multilingual user base.	A chat interface on a mock e-commerce product page. The LLM agent should be able to answer questions like ""When will my order arrive?"" or ""What is the return policy?"". The prototype will use an LLM API and a predefined set of mock data (e.g., a JSON object with order details) to answer queries, simulating an API call to a real backend.	Industry, Commerce & Logistics	Software / AI
26	Supply Chain Traceability Platform for Authenticating Organic Spices from Kerala	Develop a platform that tracks organic spices (like cardamom and pepper) from the farm in Kerala to the end consumer. Each batch is registered on the blockchain, and its journey is updated at every stage (processing, packaging, shipping). Consumers can scan a QR code to view the product's origin and authenticity certificates.	India is a major spice exporter, but concerns about authenticity and organic certification are prevalent. A transparent, blockchain-based traceability system can build trust with global buyers, prevent adulteration, and ensure that farmers who practice organic farming receive a premium price for their produce.	A web app with views for a 'Farmer', a 'Processor', and a 'Consumer'. The 'Farmer' can create a new batch of spices on a testnet. The 'Processor' can update its status. The 'Consumer' can scan a QR code to see a simple timeline view of the batch's journey and a link to a mock 'Organic Certificate' stored on IPFS.	Industry, Commerce & Logistics	Software / Blockchain
27	Smart Contract-based Bill of Lading for International Shipping from Indian Ports	Create a digital, smart contract-based Bill of Lading (B/L) to replace the traditional paper-based document in the shipping industry. The smart B/L automatically transfers ownership of the cargo and triggers payments as conditions (e.g., arrival at port, customs clearance) are met and verified by trusted oracles.	International shipping is hampered by slow, paper-intensive processes. The Bill of Lading is a critical document, and digitizing it on a blockchain can drastically reduce paperwork, minimize fraud, and accelerate the trade finance process, making Indian exports more competitive.	A web interface for an 'Exporter', an 'Importer', and a 'Shipping Line'. The 'Exporter' can generate a smart B/L on a testnet. The prototype should allow the 'Shipping Line' to update the status of the cargo (e.g., 'Onboard', 'Arrived'). When the status is 'Arrived', the smart contract should automatically register the transfer of ownership to the 'Importer'.	Industry, Commerce & Logistics	Software / Blockchain
28	Royalty Management System for Independent Musicians in the Indian Indie Music Scene	Design a platform where independent artists can register their music on a blockchain, creating a transparent record of ownership. Smart contracts can automatically collect and distribute royalties to all rights holders (artist, lyricist, composer) whenever the song is streamed or licensed, based on pre-agreed splits.	The Indian indie music scene is growing, but royalty distribution is often opaque and unfair to artists. A blockchain-based system can provide radical transparency, ensuring that artists are compensated fairly and instantly for their work, empowering them to build sustainable careers.	A web app where an 'Artist' can upload a (mock) song and define royalty splits (e.g., Artist: 60%, Lyricist: 40%) in a smart contract on a testnet. A simple 'Simulate Stream' button would trigger a function that distributes a tiny amount of mock cryptocurrency to the respective wallet addresses according to the defined splits.	Industry, Commerce & Logistics	Software / Blockchain
29	Vernacular Language Tutoring Agent to Improve English Literacy for Students in Tier-3 Indian Cities	Create an AI-powered chatbot that helps students in Tier-3 cities practice conversational English. The agent should be able to have simple conversations, correct grammatical mistakes, explain vocabulary in the user's native language (e.g., Hindi), and provide personalized exercises.	While English proficiency is a key skill for upward mobility in India, students in smaller cities and towns often lack opportunities to practice speaking with fluent speakers. An accessible, non-judgmental AI tutor can provide a safe environment for students to build confidence and improve their English skills.	A web-based chat application. The backend should use an LLM API with a system prompt that defines its role as a friendly English tutor who can explain things in Hindi. The prototype should demonstrate: 1) A simple conversation. 2) Correcting a grammatical error made by the user. 3) Explaining an English word in Hindi when asked.	Education & Community	Software / AI
30	AI-powered Personalized Learning Path Generator for Competitive Exam Aspirants (UPSC, JEE)	Develop a platform that creates a customized study plan for students preparing for competitive exams like UPSC or JEE. The system should assess the student's strengths and weaknesses through an initial diagnostic test and then generate a dynamic learning path, recommending specific topics, resources (videos, articles), and practice quizzes.	Millions of students in India prepare for these high-stakes exams, but often follow a one-size-fits-all study plan. A personalized approach can help students focus on their weak areas, optimize their preparation time, and learn more effectively, leading to better outcomes.	A web app that first presents a short, 10-question multiple-choice quiz on a subject (e.g., Physics). Based on the results, the backend logic should generate and display a personalized list of topics to study, in a specific order. The prototype should map incorrect answers to a predefined list of topics. For example, if a question on 'Optics' is wrong, 'Optics' is added to the study plan.	Education & Community	Software / AI
31	AI Tool for Creating Educational Content for Children with Learning Disabilities	Build a web-based tool that helps teachers and parents generate customized learning materials (like social stories, simplified texts, visual aids) for children with autism or dyslexia. The user can input a concept (e.g., 'sharing toys') and the child's specific needs, and the GenAI model will create age-appropriate and easy-to-understand content.	Creating tailored educational content for children with special needs is time-consuming for educators and parents. A GenAI tool can quickly produce a variety of materials, making personalized education more accessible and helping these children learn crucial social and academic skills more effectively.	A simple web interface where a user can enter a topic, select a disability (e.g., Autism), and desired output format (e.g., 'Simple Story'). The backend uses a multimodal LLM API to generate a short story with simple sentences and also suggests an image that could accompany it. The prototype should showcase the generation of one such story.	Education & Community	Software / AI
32	Digital Certificate and Credential Verification System for Indian Universities	Create a platform where universities can issue academic degrees and transcripts as secure, tamper-proof digital credentials on a blockchain. Students can store these in a digital wallet, and employers or other institutions can instantly verify their authenticity without contacting the university.	Verifying academic credentials in India is a slow, manual process, prone to fraud with fake degrees. A blockchain-based system simplifies and secures this process, benefiting students, employers, and universities. It can reduce administrative costs and speed up hiring and admissions processes.	A web app with interfaces for a 'University', a 'Student', and an 'Employer'. The 'University' can issue a digital degree (as an NFT or verifiable credential) to a student's wallet address on a testnet. The 'Student' can view their certificate. The 'Employer' can enter the certificate ID and instantly see its details, confirming its validity.	Education & Community	Software / Blockchain

33	Decentralized Autonomous Organization (DAO) for Managing and Funding Community Projects	Develop a platform for a local community (e.g., a college club, a neighborhood association) to operate as a DAO. Members can submit proposals for community projects, vote on them using governance tokens, and the DAO's treasury (funded by members) can automatically release funds to approved projects via smart contracts.	Community organizations often suffer from a lack of transparency in decision-making and financial management. A DAO structure can enable more democratic governance, transparent fund allocation, and increased member participation, fostering a stronger and more engaged community.	A web interface for DAO members. The prototype should allow a user to: 1) View current proposals. 2) Create a new proposal (e.g., 'Organize a tree-planting drive for 1 ETH'). 3) Vote on an existing proposal. The smart contracts on a testnet will manage the proposal and voting logic. The voting power can be based on a simple 1-member-1-vote token distribution.	Education & Community	Software / Blockchain
34	Traffic Density Analysis and Signal Control System for Smart Cities	Develop a system that uses cameras at traffic junctions to analyze vehicle density in real-time. Based on the traffic flow, the system can dynamically adjust the timing of traffic signals to optimize vehicle movement, reduce congestion, and minimize waiting times.	Traffic congestion is a chronic problem in Indian cities, leading to pollution, fuel wastage, and lost productivity. Smart traffic signals that adapt to real-time conditions, rather than operating on fixed timers, can significantly improve traffic flow and make urban commuting more efficient.	A web application that shows a simulated video feed of a traffic intersection. A computer vision model (like YOLOv5) running on the backend should process this feed (or static images from it) and count the number of vehicles in each lane. The UI should display the vehicle count and suggest an optimal signal timing (e.g., 'Green light for Lane A: 45 seconds').	Smart Cities & Infrastructure	Software / AI
35	Pothole Detection and Reporting System using Smartphone Sensors	Create a mobile app that uses a smartphone's camera and accelerometer to automatically detect potholes and road damage while a person is driving. The app should capture the pothole's image and GPS location and automatically report it to the local municipal corporation's dashboard for swift action.	Potholes are a major civic issue in India, causing accidents and vehicle damage. Manual reporting is inefficient. An automated, crowdsourced system can help municipal bodies create a real-time map of road damage, prioritize repairs, and improve road safety and maintenance.	A mobile web app that can take a picture and access mock location data. When a user clicks 'Report Pothole', the app uploads the image and location to a backend. The main feature of the prototype is a dashboard map (using Leaflet) that displays pins for all reported potholes, which an official can view. The ML detection part can be simulated for the hackathon.	Smart Cities & Infrastructure	Software / AI
36	Multilingual Grievance Redressal Chatbot for Municipal Services	Develop a chatbot for a city corporation's website or WhatsApp that allows citizens to report civic issues (e.g., garbage not collected, broken streetlight) in their local language. The LLM should understand the complaint, categorize it, and automatically file it in the official portal, providing the user with a tracking number.	Citizens often struggle to navigate complex government websites to file complaints. A simple, conversational interface in their own language can make grievance redressal more accessible. This can lead to faster resolution of civic issues and improve the accountability of municipal services.	A web-based chatbot interface. A user can type a complaint in Hindi or Tamil, e.g., ""Hamare area me kachra nahi utha hai"" (Garbage has not been collected in our area). The LLM backend should correctly classify the complaint category as 'Waste Management' and generate a mock ticket number as a response, confirming the complaint has been registered.	Smart Cities & Infrastructure	Software / AI
37	Land Registry System to Prevent Property Fraud in Urban India	Design a decentralized system for recording and transferring land titles. Each property is represented as a unique token (NFT) on the blockchain, and all transactions (sale, mortgage) are recorded as immutable entries. This creates a transparent and tamper-proof record of ownership, reducing property fraud.	Land record management in India is notoriously complex and opaque, leading to widespread litigation and fraud. A blockchain-based registry can provide a single source of truth for land ownership, drastically improving transparency, reducing disputes, and simplifying property transactions.	A web application with a simple map interface showing land parcels. Each parcel is a clickable NFT on a testnet. The prototype should allow the current 'owner' of a parcel NFT to initiate a transfer to a 'buyer'. The transaction must be signed by both parties to be executed by the smart contract, demonstrating a secure transfer of ownership.	Smart Cities & Infrastructure	Software / Blockchain
38	Crowdfunding Platform for Public Infrastructure Projects	Create a platform where citizens can propose and crowdfund small-scale public infrastructure projects (e.g., a new park bench, a community library). The funds are held in a transparent smart contract and are released to the contractor only when community members vote to verify that project milestones have been completed.	Citizens often feel disconnected from the development of their own neighborhoods. A decentralized crowdfunding platform can empower communities to directly fund and oversee projects they care about, fostering a sense of ownership and ensuring that public funds are used effectively and transparently.	A web app showcasing a list of proposed projects. Users can contribute mock cryptocurrency to a project of their choice. For one project, the prototype should show a 'Milestone 1 Completed' status, allowing token holders (contributors) to vote 'Approve Release of Funds'. The smart contract would then execute a mock transfer to the project owner's address.	Smart Cities & Infrastructure	Software / Blockchain
39	AI-based Yield Prediction Model using Satellite Imagery for Sugarcane Farmers in any geographical location	Create a machine learning model that uses publicly available satellite imagery (from sources like Sentinel or Landsat) and weather data to predict the expected yield of sugarcane crops in a specific region. This information can help farmers make better decisions about irrigation, fertilization, and when to harvest.	Accurate yield prediction is crucial for farmers' financial planning and for managing the national food supply chain. Traditional methods are often inaccurate. A data-driven approach using satellite imagery provides a scalable and cost-effective way to forecast agricultural output, benefiting farmers, sugar mills, and policymakers.	A Python backend that can process satellite image data (sample GeoTIFF files). The core of the prototype is the trained ML model (e.g., a regression model using Random Forest) that takes vegetation indices (like NDVI) extracted from the images as input and outputs a predicted yield in tonnes per hectare. The result can be displayed on a simple web page.	Agriculture & Food	Software / AI
40	Chatbot for Government Agricultural Scheme Information for Farmers (RAG)	Develop a multilingual chatbot (via WhatsApp or a web app) that provides farmers with easy-to-understand information about various government schemes (e.g., PM-KISAN, crop insurance). The chatbot should be able to answer questions about eligibility criteria, application processes, and required documents in the farmer's native language.	The Indian government runs numerous complex agricultural schemes, but information about them often doesn't reach small and marginal farmers effectively due to language barriers and digital illiteracy. A conversational AI can bridge this information gap, helping farmers access the benefits they are entitled to.	A web-based chat interface. A user can ask a question in Hindi like ""PM-KISAN ke liye kaise apply karein?"" (How to apply for PM-KISAN?). The backend uses an LLM API, with a knowledge base of government scheme PDFs fed into its context (via RAG - Retrieval-Augmented Generation). The prototype should find and present the relevant information in a simplified, conversational manner.	Agriculture & Food	Software / AI

41	Supply Chain Traceability for Fair-Trade Coffee	Design a system to track coffee beans from the plantation to the final consumer. Each batch is given a unique digital identity on the blockchain. Data about its journey, quality certifications, and the price paid to the farmer is recorded at each step. This allows consumers to verify the product's fair-trade claims.	Consumers are increasingly willing to pay a premium for ethically sourced, fair-trade products. However, they lack a reliable way to verify these claims. A blockchain-based system provides radical transparency, ensuring that coffee farmers receive their fair share and building consumer trust in the brand.	A mobile-first web app with a QR code scanner. When a consumer scans a QR code on a coffee pack, the app should query a testnet blockchain for that batch ID and display its journey: 'Farmed by [Farmer Name] in Coorg', 'Processed at [Co-op Name]', 'Fair-Trade Price Paid: XXX'. The prototype should focus on this consumer-facing traceability view.	Agriculture & Food	Software / Blockchain
42	Parametric Crop Insurance for Drought-Prone Regions	Create a crop insurance product that uses smart contracts and a trusted weather data oracle (an external data source). The insurance policy is automatically triggered, and claims are paid out instantly to farmers' digital wallets if rainfall in their district falls below a predefined threshold during a critical period.	Traditional crop insurance in India suffers from long delays in claim settlement due to manual damage assessment. Parametric insurance on the blockchain automates this process based on verifiable data (like rainfall), ensuring that farmers receive timely financial support when they need it most, helping them cope with climate shocks like droughts.	A web interface where a 'Farmer' can purchase an insurance policy for their district. A separate 'Admin' interface should have a button to 'Simulate Oracle Data'. If the admin inputs a rainfall value below the policy's threshold, the smart contract on a testnet should automatically execute a mock payment to the farmer's wallet address.	Agriculture & Food	Software / Blockchain
43	AI-powered Content Moderation System to Detect Hate Speech and Trolls in Indian Social Media	Build an AI model that can detect hate speech, abusive comments, and coordinated trolling in English, Hindi, and Hinglish. The system should understand the nuances of local context, slang, and code-switching to effectively flag harmful content for human review.	Social media platforms in India are struggling to contain the explosion of online toxicity and hate speech, which can incite real-world violence. An AI moderation tool that understands the specific linguistic and cultural context of India can help platforms create safer online spaces for their users.	A web application with a text box where a user can enter a comment. The backend should use an NLP model (e.g., a fine-tuned BERT model or an LLM with a classification prompt) to analyze the text and classify it as 'Toxic', 'Abusive', or 'Neutral'. The prototype should be able to classify at least 10 different sample comments correctly.	Media, Social & Communication	Software / AI
44	Generative AI Tool for Creating Personalized Storybooks for Children in Indian Vernacular Languages	Develop a web platform where a parent can enter their child's name, a moral (e.g., 'honesty'), and choose a setting (e.g., 'a village in Punjab'). The GenAI tool then creates a short, illustrated storybook in the selected vernacular language (e.g., Punjabi), personalizing the learning experience for the child.	There is a scarcity of high-quality, engaging children's literature in many Indian languages. A GenAI tool can democratize content creation, allowing parents and educators to generate an endless supply of personalized stories that reflect the child's own world and culture, fostering a love for reading.	A web interface with input fields for child's name, theme, and language. The backend sends a detailed prompt to a multimodal LLM API (like Gemini). The prototype should generate a 3-page story (text) and three corresponding image prompts. The web page should display the text and use a placeholder image API to show mock illustrations based on the generated prompts.	Media, Social & Communication	Software / AI
45	Blockchain-based Platform for Verifying the Authenticity of News Sources and Combating Disinformation	Create a decentralized system where credible journalistic organizations are registered on a blockchain. When they publish an article, they can create a hash of the content and store it on-chain. Readers can use a browser extension to verify if the article they are reading is an unaltered version from a verified source.	The spread of disinformation is a major threat to democracy. By creating a system to verify the provenance of news articles, this platform can help readers distinguish between credible journalism and fabricated content, thereby building a more informed citizenry and restoring trust in media.	A simple blog-like web page where a 'Journalist' from a registered organization can post an article. On posting, a hash of the content is stored on a testnet blockchain. A separate 'Verification' page should allow a user to paste the article's text, recalculate the hash, and check if it matches the one stored on-chain, thus verifying its authenticity.	Media, Social & Communication	Software / Blockchain
46	Blockchain-based Renewable Energy Certificate (REC) Trading Platform	Develop a transparent marketplace for trading Renewable Energy Certificates (RECs) on a blockchain. Renewable energy producers (like a solar farm) can generate and sell these digital certificates. Corporations that need to meet their renewable purchase obligations (RPOs) can buy them in a transparent and auditable manner.	The current REC trading mechanism in India faces challenges of opacity and inefficiency. A blockchain-based platform can streamline the process, ensure transparency, and prevent double counting of certificates, thereby boosting confidence in the green energy market and encouraging investment in renewable projects.	A simple exchange-like web interface. A 'Producer' should be able to 'issue' a certain number of REC tokens on a testnet. A 'Buyer' (corporation) should be able to view the available RECs and place a 'buy' order. The prototype's smart contract should handle the matching of orders and the transfer of REC tokens and mock payment.	Energy & Resource Management	Software / Blockchain
47	RTI (Right to Information) Application Assistant for Indian Citizens	Build an LLM-based tool that helps citizens draft effective RTI applications. The user describes the information they need in simple language, and the tool helps them frame the questions correctly, identifies the appropriate government department, and generates the application in the prescribed format.	The RTI Act is a powerful tool for transparency, but citizens often struggle to file effective applications due to bureaucratic complexities and legal jargon. An AI assistant can empower ordinary citizens to use the RTI Act more effectively, holding government institutions accountable and promoting transparency.	A web-based form where a user can describe their query in a text box (e.g., ""I want to know how much my MLA spent on roads in my area""). The backend uses an LLM API to process this query and generate a formatted RTI application with structured questions. The prototype should display the generated text, which the user can copy.	Governance & Public Good	Software / AI
48	Legal Document Summarization and Analysis Tool for Indian Law Students	Create a web application that can summarize lengthy legal documents like court judgments or statutes. The tool should use NLP to extract key arguments, identify the legal principles discussed, and list the cited precedents, helping law students and young lawyers to quickly grasp the essence of complex documents.	The Indian legal system is known for its voluminous and complex documents. Manually reading and summarizing these is incredibly time-consuming. An AI-powered tool can significantly boost the productivity of legal professionals, enabling them to focus on higher-level analysis and strategy.	A web app where a user can paste the text of a legal judgment. The backend uses an LLM with a specific prompt designed for legal summarization. The prototype should output three sections: 1) A concise summary of the judgment. 2) A list of key legal issues identified. 3) A list of other cases cited in the document.	Governance & Public Good	Software / AI

49	Monitoring and Analyzing Government Tender Data for Corruption Red Flags	Develop a system that scrapes and analyzes public tender data from government portals. The AI model should look for patterns that could indicate corruption, such as single-bid tenders, tenders awarded to companies with political connections, or unusually short bidding periods. The system should flag suspicious tenders for investigation by journalists or civic bodies.	Government procurement is a major area of public spending and is highly susceptible to corruption. Manually scrutinizing thousands of tenders is impossible. An AI tool can act as a digital watchdog, automatically flagging potential irregularities and promoting transparency and accountability in public spending.	A dashboard that displays a list of mock tender data. A backend Python script with a rule-based or simple ML model should process this data. The prototype should be able to flag tenders based on predefined rules, e.g., flag a tender if 'number_of_bidders' is 1, or if the 'award_date' is too close to the 'publish_date'. The flagged tenders should be highlighted in the UI.	Governance & Public Good	Software / AI
50	Smart Water Metering System for Residential Apartments in Urban India	Develop a system with low-cost IoT water meters to track real-time water consumption for individual flats in an apartment complex. The data is sent to a central dashboard, enabling automated billing, leakage detection, and providing residents with insights into their usage patterns to encourage conservation.	Water disputes and inequitable distribution are common in Indian apartment complexes that rely on a single building-level meter. Individual smart meters promote accountability, enable fair billing based on actual usage, and help in the early detection of leaks, conserving a precious resource. A 2018 NITI Aayog report stated that 21 major Indian cities could run out of groundwater by 2020.	A dashboard prototype that visualizes data from 5-10 simulated IoT meters. A script should generate random water flow data every few seconds. The dashboard should display real-time consumption for each flat, calculate the total consumption, and trigger an alert if a flat's consumption is continuously high for a prolonged period (simulating a leak).	Smart Cities & Infrastructure	IoT / Other
51	IoT and AI-based Smart Streetlight System for Energy Conservation	Design a system where streetlights are fitted with IoT sensors (light and motion). The lights automatically dim to a lower level when there is no traffic or pedestrian movement and brighten when motion is detected. An AI-powered central dashboard can monitor the status of all lights and predict maintenance needs.	Streetlights account for a significant portion of a city's electricity budget. Smart streetlights can reduce energy consumption by up to 60-70%, leading to massive cost savings and a lower carbon footprint. This also improves safety by ensuring well-lit streets when needed.	A web-based dashboard showing a map with 10-15 streetlight icons. A simulator would allow a user to trigger a 'motion detected' event near a specific light. In response, the icon for that light and adjacent lights should change color on the dashboard to indicate they have brightened. The prototype should also flag a light that is 'Not Responding' (simulating a fault).	Smart Cities & Infrastructure	IoT / Other
52	Public Bus Tracking and Information System for Tier-2 Cities	Create a system where public buses are equipped with GPS trackers. A central server processes this data and provides real-time bus locations and estimated arrival times (ETAs) to commuters via a mobile-friendly web app. Digital display boards at bus stops can also show this information.	Public transport in many Indian cities is unreliable due to a lack of real-time information, discouraging its use. A live tracking system makes the service more predictable and convenient for passengers, which can boost ridership and reduce dependence on private vehicles.	A web app with a map (like Leaflet) that shows the real-time movement of 3-4 simulated bus icons along predefined routes. The server-side script will update the coordinates of the buses every few seconds. A user should be able to click on a bus stop icon to see the ETA of the next bus on that route.	Smart Cities & Infrastructure	IoT / Other
53	Smart Waste Management System for Urban Neighborhoods	Equip community dustbins with ultrasonic sensors to monitor their fill levels. This data is sent to a central dashboard. The system then generates optimized collection routes for sanitation trucks, directing them only to the bins that are full or nearly full, saving fuel, time, and labor.	Traditional waste collection follows a fixed schedule, leading to inefficient routes where half-empty bins are cleared while others overflow. A smart system ensures timely collection, prevents overflowing bins, and makes the entire waste management process more efficient and cost-effective for municipal corporations.	A dashboard showing a map of a neighborhood with icons for several smart bins. The fill level of each bin (simulated data) should be displayed using a color code (green, yellow, red). The prototype should have a button 'Generate Optimal Route', which would then highlight a path on the map connecting only the red and yellow bins.	Smart Cities & Infrastructure	IoT / Other
54	Air and Noise Pollution Monitoring Network for Industrial Zones	Deploy a network of low-cost IoT sensor nodes in and around an industrial area to monitor key pollutants (PM2.5, SO2, NOx) and noise levels in real-time. The data is streamed to a public dashboard, providing transparent environmental data to citizens and regulators.	Pollution from industrial areas is a major health hazard, but official monitoring stations are often sparse. A dense network of low-cost sensors can provide granular, real-time data, helping authorities enforce environmental norms and allowing local communities to hold polluting industries accountable.	A web dashboard that displays real-time readings from 5-6 simulated sensor nodes on a map. Each node, when clicked, should show a chart with the historical data for PM2.5 and noise levels over the last hour. The simulator script will generate random but realistic data for this. Alerts should be shown if readings exceed a predefined safe limit.	Sustainable Tech & Climate Solutions	IoT / Other
55	Soil Nutrient Analysis System for Personalized Fertilizer Recommendations	Design a system with an IoT probe that can measure key soil nutrients like Nitrogen (N), Phosphorus (P), and Potassium (K) levels. The data is sent to a mobile app, which then provides the farmer with a precise recommendation for the type and amount of fertilizer needed for their specific crop.	Excessive and imbalanced use of chemical fertilizers in India has degraded soil health and polluted water bodies. A soil nutrient analysis system enables precision agriculture, allowing farmers to apply only the required amount of fertilizer, which reduces costs, improves soil health, and minimizes environmental impact.	A web app where a farmer can see the N, P, K values from a simulated soil sensor. Based on these values and a selected crop type (e.g., 'Rice'), the app should calculate and display a fertilizer recommendation like: 'Apply 25 kg Urea, 50 kg DAP per acre'. The calculation logic can be a simple rule-based system for the prototype.	Agriculture & Food	IoT / Other
56	Energy Consumption Monitoring for Small and Medium Enterprises (SMEs)	Develop a system using non-invasive clamp-on IoT energy meters to monitor the electricity consumption of individual heavy machines in an SME factory. A dashboard provides the factory manager with real-time and historical energy usage data, helping to identify energy-inefficient machines and opportunities for conservation.	Energy costs are a major operational expense for SMEs. Understanding which machines consume the most power and when is the first step towards energy efficiency. An IoT monitoring system provides the necessary data to make informed decisions, reduce electricity bills, and improve profitability.	A web dashboard that displays the real-time power consumption (in kW) of 3-4 different machines in a factory (using simulated data). It should also show a pie chart of the total energy consumed by each machine over the last 24 hours. This helps the manager quickly identify the most energy-hungry equipment.	Energy & Resource Management	IoT / Other
57	Patient Monitoring System for Remote Clinics and Home Quarantine	Develop an IoT kit that includes sensors for monitoring a patient's vital signs (heart rate, body temperature, blood oxygen level - SpO2). The data is transmitted wirelessly to a doctor's dashboard, allowing for continuous remote monitoring of patients in rural clinics or those under home quarantine.	Access to continuous health monitoring is limited in remote areas and can be resource-intensive during health crises. An IoT-based remote monitoring system can help doctors keep track of multiple patients' conditions without being physically present, enabling timely interventions and improving healthcare outcomes.	A doctor's dashboard web application that displays a grid of patients. Each patient card should show their latest (simulated) heart rate, temperature, and SpO2 readings. If any patient's vital signs cross a critical threshold (e.g., SpO2 < 94%), their card should flash red to draw the doctor's immediate attention.	Healthcare & Life Sciences	IoT / Other

58	Smart Medicine Box for Elderly Patients	Create a smart pill box with compartments for different medicines. The box uses sensors and a timer to remind elderly patients to take their medication through light and sound alerts. It also sends a notification to a caregiver's phone if a dose is missed.	Medication adherence is a major challenge for the elderly, especially those with multiple prescriptions. A smart medicine box can reduce the risk of missed doses or accidental overdoses, helping them manage their health better and providing peace of mind to their families.	A web app for a caregiver. It should display the schedule for an elderly patient's medication. A simulator backend would mimic the time of day. When it's time for a dose, the backend should send an event to the UI to show 'Reminder sent to patient'. If the patient (simulated by a button press) doesn't 'take' the medicine within 30 minutes, the UI should show a 'Dose Missed Alert'.	Healthcare & Life Sciences	IoT / Other
59	Personalized News and Content Aggregator for Indian Vernacular Readers	Develop a mobile-first web app that aggregates news and articles from various Indian language sources. The app uses NLP and machine learning to understand a user's reading preferences and creates a personalized feed, helping them discover content that matters to them without information overload.	The Indian digital content landscape is exploding with vernacular content, but discovery is a problem. A smart aggregator that curates a personalized feed can provide a much better user experience than generic news portals, promoting readership in regional languages.	A web application that displays a feed of 10-15 sample news articles. The user can 'like' or 'dislike' articles. The backend should have a simple collaborative filtering or content-based filtering model. After the user rates a few articles, a 'Refresh Feed' button should show a new set of articles, prioritized based on their expressed preferences.	Media, Social & Communication	Software / AI
60	Sentiment Analysis Tool for Brand Monitoring in the Indian Market	Develop a dashboard that tracks social media mentions of a particular brand in India and performs sentiment analysis on them. The tool should be able to handle Hinglish and other code-switched languages to accurately classify mentions as positive, negative, or neutral, providing brands with real-time insights into public perception.	Understanding customer sentiment is crucial for brands, but the linguistic diversity of Indian social media makes this challenging. An AI tool that can accurately gauge sentiment in local languages can help brands quickly respond to customer feedback, manage their reputation, and understand market trends.	A web application where a user can enter a brand name. The backend would use a social media API to pull a few recent, public posts mentioning the brand (or use a static dataset for the prototype). An NLP model (like a fine-tuned BERT or an LLM) should then process these posts and the dashboard should display a pie chart showing the sentiment breakdown (e.g., 60% Positive, 30% Negative, 10% Neutral).	Media, Social & Communication	Software / AI
61	Career Counselor Chatbot for High School Students in India	Create a chatbot that helps students in classes 10-12 explore various career options. The chatbot should ask students about their interests, subjects, and skills, and then suggest potential career paths, colleges, and entrance exams. It can provide information on both traditional and unconventional careers relevant to the Indian job market.	Students in India often face immense pressure and confusion when choosing a career path, with limited access to professional guidance. An AI-powered counselor can provide personalized, data-driven information 24/7, helping students make more informed and confident decisions about their future.	A web-based chatbot. The prototype should have a guided conversation flow. It asks the user a series of multiple-choice questions (e.g., 'Which subject do you like most? Math/Biology/History'). Based on the user's answers, the chatbot's logic should recommend one of 3-4 predefined career paths and display a short description of it. The logic can be a simple decision tree.	Education & Community	Software / AI
62	Crowdfunding Platform for Independent Journalists and Investigative Reporters in India	Develop a decentralized platform where independent journalists can pitch story ideas and raise funds directly from the public. Readers can contribute cryptocurrency to fund stories they believe are important. Smart contracts ensure that the funds are released to the journalist in milestones as they complete their work.	Investigative journalism is vital for a healthy democracy but is often underfunded. A blockchain-based crowdfunding platform can provide an alternative, censorship-resistant funding model, empowering journalists to pursue important stories without corporate or government influence.	A web platform showing cards for several 'Story Proposals'. Users can click on a proposal and 'Fund Story' using mock cryptocurrency on a testnet. The prototype should allow the 'Journalist' who created the proposal to claim the funds after the funding goal is reached.	Media, Social & Communication	Software / Blockchain
63	Inventory Management and Demand Forecasting System for Kirana Stores	Create a simple application for Kirana store owners that helps them manage their inventory and predict demand for various products. The system can use past sales data to forecast which items will be in high demand, suggesting optimal reorder quantities to prevent stockouts and reduce capital tied up in slow-moving inventory.	Kirana stores are the backbone of Indian retail but often rely on guesswork for inventory management. A data-driven forecasting tool can help them optimize their stock, improve profitability, and compete more effectively with large retail chains.	A web dashboard that displays the current stock levels for a list of 20-30 products (from a sample sales dataset). The backend should use a time-series forecasting model (like ARIMA or Prophet) to predict the next week's sales for the top 5 products. The dashboard should display these predictions and suggest a 'Reorder Quantity'.	Industry, Commerce & Logistics	Software / AI
64	Logistics Platform for Optimizing Last-Mile Delivery using Drones	Design a simulation platform for planning and optimizing last-mile delivery routes using a fleet of drones in a dense urban environment like Bengaluru. The system should calculate the most efficient routes, considering factors like battery life, payload capacity, weather conditions, and no-fly zones.	As e-commerce continues to grow, last-mile delivery is becoming increasingly expensive and congested. Drones offer a potential solution for faster and more sustainable deliveries. An AI optimization platform is essential to manage a drone fleet effectively and make this futuristic vision a reality.	A web app with a map interface of a small area. A user can place a 'warehouse' pin and several 'delivery' pins. The backend logic (which can be a simple pathfinding algorithm like A* for the prototype) should then calculate and draw the optimal flight paths for a simulated drone, displaying the total time and distance.	Industry, Commerce & Logistics	Software / AI
65	Chatbot for Navigating Complex Indian Government Portals and Services	Develop an AI chatbot that acts as a universal guide for various government websites (like passport services, income tax filing). The user can state their goal in simple, natural language (e.g., ""I want to apply for a new passport""), and the chatbot provides step-by-step instructions, links to the correct forms, and answers to frequently asked questions.	Indian government websites are often notoriously difficult to navigate, with confusing layouts and bureaucratic language. An AI guide can simplify these processes, making essential public services more accessible to the average citizen and reducing their reliance on expensive agents.	A web-based chat interface. The prototype should be programmed with knowledge about one specific government service (e.g., applying for a PAN card). It should be able to guide a user through the simulated steps of the process. For example, if a user asks ""What documents do I need?"", it should provide a predefined list. The conversation flow can be rule-based.	Governance & Public Good	Software / AI

66	Digital Voting System for Shareholder Meetings of Indian Companies	Develop a secure platform for companies to conduct shareholder voting during Annual General Meetings (AGMs). Eligible shareholders receive voting tokens and can cast their votes on various resolutions remotely. The results are transparent, instantly auditable on the blockchain, and cannot be tampered with.	Corporate governance in India requires transparent and fair shareholder voting. A blockchain-based system enhances the integrity of this process, makes remote participation easier for shareholders, and reduces the administrative burden and cost associated with traditional voting methods.	A web interface for a mock shareholder meeting with 2-3 resolutions to vote on. Pre-registered 'shareholders' (specific wallet addresses) can connect their wallet and cast 'Yes' or 'No' votes on each resolution. The platform should display the live results of the voting in real-time by reading the data from the smart contract on a testnet.	Finance & Security	Software / Blockchain
67	Noise Cancellation and Speech Enhancement for Online Classes in Noisy Indian Homes	Develop a real-time audio processing tool that can be used during online classes or meetings. The AI model should be able to isolate the speaker's voice and suppress common background noises found in Indian households (e.g., pressure cooker whistles, street vendor cries, fan noise), improving communication and learning.	Online learning in India is often disrupted by chaotic home environments. Poor audio quality makes it difficult for students and teachers to understand each other. An AI-powered noise cancellation tool can significantly improve the quality of online education by creating a clearer and more focused auditory experience.	A web page that can record audio from the microphone. The prototype should have a 'Record and Process' button. When clicked, it records 5 seconds of audio, sends it to a backend where a pre-trained speech enhancement or noise reduction model (like a simple spectral subtraction algorithm or a more advanced deep learning model) processes it, and then allows the user to play back the 'cleaned' audio.	Education & Community	Software / AI
68	Intellectual Property (IP) Registry for Digital Artists and Content Creators	Create a platform where digital creators can register a timestamped, immutable proof of ownership for their work (art, music, videos) on a blockchain. This serves as a public record that can be used to prove authorship and fight against plagiarism or unauthorized use of their digital assets.	In the digital age, it's easy for content to be copied and shared without credit or permission. A blockchain-based IP registry provides creators with a simple and affordable way to establish a verifiable claim over their work, empowering them to protect their intellectual property rights.	A web application where a 'Creator' can upload a digital file (e.g., an image). The system calculates a hash of the file and stores this hash, along with the creator's identity and a timestamp, on a testnet blockchain. The prototype should allow anyone to upload the same file later and see that it has already been registered, showing the original creator's details.	Finance & Security	Software / Blockchain
69	Smart Parcel Lockers for Secure Last-Mile Delivery in Apartment Complexes	Develop a system of smart lockers for apartment buildings. Delivery agents can place a parcel in an empty locker by scanning a code. The system then automatically sends a one-time password (OTP) to the resident's mobile phone. The resident can use this OTP to open the locker and retrieve their package at their convenience.	Package theft and missed deliveries are common problems in large residential complexes. Smart parcel lockers provide a secure and convenient solution for last-mile delivery, improving efficiency for e-commerce companies and ensuring residents receive their packages safely.	A web-based interface simulating both the delivery agent's and resident's experience. The 'Agent' view should show a grid of lockers, allowing them to select an empty one and 'deposit' a package for a specific flat number. This action should trigger the display of a mock OTP on the 'Resident's' view. The resident can then enter this OTP to 'unlock' the locker.	Industry, Commerce & Logistics	Software/ AI
70	Blockchain-based Trade Finance Platform for Indian Exporters and Importers	Develop a platform that uses smart contracts and digital assets to streamline the trade finance process (e.g., Letter of Credit). The platform provides a shared, trusted ledger for all parties (exporter, importer, banks, shipping line) to track documents and trigger payments automatically when contractual conditions are met, reducing paperwork and delays.	International trade finance is a cumbersome process, heavily reliant on paper and manual verification, which leads to delays and high costs. A blockchain platform can digitize and automate these workflows, making trade finance more efficient, secure, and accessible for Indian businesses, especially SMEs.	A web dashboard showing the status of a trade transaction. The prototype should model a simple Letter of Credit workflow. The 'Importer's Bank' can issue a smart contract LC. The 'Exporter' can submit a (mock) Bill of Lading. When the required documents are submitted, the smart contract on a testnet should automatically execute a mock payment from the importer's bank to the exporter's bank.	Finance & Security	Software / Blockchain
71	Platform for Simulating the Impact of Public Policies	Create a simulation tool that allows policymakers to model the potential impact of a new policy before it's implemented. For example, simulating the effect of a change in the public transport ticketing price on traffic congestion, pollution levels, and commuter behavior using an agent-based model.	Policymaking often has unintended consequences. A data-driven simulation platform can act as a 'digital twin' of a city or a system, allowing policymakers to experiment with different options in a virtual environment to make more informed, evidence-based decisions.	A web-based dashboard where a user can adjust policy parameters (e.g., a slider for 'bus fare'). The backend runs an agent-based simulation where thousands of simulated citizens make daily travel choices based on these parameters. The dashboard then visualizes the outcome with metrics and maps.	Governance & Public Good	Software / AI
72	AI Recommendation Engine for Matching Students with Volunteer Opportunities in their Community	Develop a platform where NGOs can list volunteering opportunities and students can find opportunities that match their skills, interests, and availability. An AI model should provide personalized recommendations to students to increase engagement.	Many students want to volunteer but struggle to find suitable opportunities. NGOs, on the other hand, need skilled volunteers. A smart matching platform can bridge this gap and foster a stronger community spirit.	A web platform with profiles for students and NGOs. A recommendation system (e.g., using collaborative filtering or content-based filtering) that matches students to listings. The prototype should allow a user to create a profile and see a list of recommended volunteer jobs.	Education & Community	Software/ AI
73	Logistics and Route Optimization System for Last-Mile Delivery in Congested Indian Cities	Design a system that optimizes delivery routes for e-commerce delivery agents in real-time. The system should consider traffic conditions, delivery time windows, vehicle capacity, and new package pickups to generate the most efficient routes dynamically.	Last-mile delivery is the most expensive and inefficient part of the logistics chain, especially in the chaotic traffic of Indian cities. AI-driven optimization can significantly reduce fuel costs, delivery times, and carbon emissions.	A web dashboard that displays a map with delivery locations. Use a routing API (like Google OR-Tools) to solve the Vehicle Routing Problem (VRP). The prototype should take a list of addresses and generate an optimized route for a single vehicle.	Industry, Commerce & Logistics	Software/ AI
74	Credit Scoring Model for Financial Inclusion of Individuals with No Formal Credit History in India	Build an alternative credit scoring model that uses non-traditional data sources like mobile phone usage, utility bill payments, and online behavior to assess the creditworthiness of individuals who are new to credit.	Millions of Indians are denied loans because they lack a formal credit history (CIBIL score). This financial exclusion limits their ability to start businesses or manage emergencies. An alternative scoring model can open up access to credit for them.	A machine learning model (e.g., Logistic Regression or Gradient Boosting) trained on a synthetic dataset representing non-traditional data. The solution should be a simple web form where a user enters sample data and gets a creditworthiness score and explanation.	Finance & Security	Software/ AI

75	Video Summarization Tool for Online Learning Content	Create a tool that takes a long educational video (e.g., a 1-hour lecture on YouTube) and automatically generates a concise text summary and a shorter 'highlight reel' video containing the most important segments.	Students often have to re-watch long lecture videos to find specific information or revise key concepts, which is time-consuming. An AI summarization tool can help them learn more efficiently.	A system that uses an STT API to transcribe the video's audio. An LLM is then used to summarize the transcript. Key sentences in the summary are mapped back to timestamps in the video to create the highlight reel using a video editing library (like FFmpeg).	Education & Community	Software/ AI
76	Agent for Negotiating Prices with Vendors on behalf of Users on Online Marketplaces	Develop an AI agent that can autonomously chat with sellers on platforms like OLX or Facebook Marketplace. The user sets a target price and budget, and the agent engages in a natural language conversation with the seller to negotiate the price down.	Negotiating prices online can be time-consuming and intimidating for many buyers. An AI agent can handle this process efficiently, leveraging negotiation strategies to get a better deal for the user.	A conversational agent built using an LLM, with a prompt engineered to follow negotiation tactics (e.g., start with a low offer, justify it, make counter-offers). The prototype should simulate a chat interface between the agent and a 'seller' (which can be another user or a scripted bot).	Industry, Commerce & Logistics	Software/ AI
77	Dynamic Pricing and Demand Prediction for Ride-sharing Services in India	Create a model that predicts the demand for ride-sharing services (like Ola or Uber) in different parts of a city and suggests dynamic pricing to balance supply (drivers) and demand (riders). The model should account for time of day, weather, local events, and traffic.	Ride-sharing platforms struggle with demand-supply gaps, leading to surge pricing for riders and long waits, or idle time for drivers. A more accurate predictive model can lead to more stable pricing and better service availability.	A machine learning model (e.g., XGBoost) that predicts demand based on historical ride data and other features. A simple algorithm that adjusts the price based on the predicted demand-supply ratio. A dashboard showing a map with predicted demand hotspots.	Smart Cities & Infrastructure	Software/ AI