Government Problem Statement

1.	**Problem Statement Title**	AI-based solution to provide a holistic view of grievances received on the Uttar Pradesh Integrated Grievance Redressal System (IGRS) for a better Decision Support System (DSS).
	Description	The Uttar Pradesh Integrated Grievance Redressal System (IGRS) is a centralized platform aimed at addressing citizen grievances effectively and efficiently. The system facilitates direct communication between citizens and government departments, ensuring transparency and accountability. However, given the large population of Uttar Pradesh and the diversity of issues raised, the volume of grievances received on the platform is immense, leading to challenges in analyzing, prioritizing, and resolving them efficiently. To address these challenges, an AI-based solution for providing a holistic view of grievances can significantly enhance the Decision Support System (DSS). The integration of artificial intelligence into the IGRS will empower government officials and policymakers to make data-driven decisions, streamline grievance redressal mechanisms, and improve governance outcomes.
	Department	Hon'ble CM Office, Uttar Pradesh
	Sector	Citizen Grievances

2.	**Problem Statement Title**	Smart and Effective real-time Management of Street Parking.
	Description	The rapid urbanization of cities worldwide has led to significant challenges in managing street parking effectively. With increasing vehicle ownership and limited parking spaces, cities face issues such as congestion, illegal parking, air pollution, and wasted time searching for available parking spots. Traditional parking management systems often fail to address these challenges, requiring innovative and smart parking solutions that leverage real-time data and technology for efficient parking management. A Smart and Effective Real-Time Street Parking Management System aims to optimize the use of street parking spaces by incorporating AI-based applications. Such a system enables dynamic monitoring, efficient allocation, and seamless payment processes, improving urban mobility and reducing environmental impact.
	Department	Urban Development
	Sector	Urban Mobility and Transportation

3.	Problem Statement Title	AI-based Smart Traffic Management System along with the capability to detect suspect and suspicious activities (Specially for Women Safety-1090).
	Description	Traffic management in urban areas is a critical challenge due to rapid urbanization, increasing vehicular traffic, and the complexity of city layouts. Simultaneously, ensuring public safety, especially for women, remains a pressing concern. Combining Artificial Intelligence (AI) with Smart Traffic Management systems can address both issues by creating a system that not only optimizes traffic flow but also enhances safety through real-time detection of suspicious activities. The integration of AI with existing traffic infrastructure, such as CCTV cameras and IoT devices, enables real-time monitoring, predictive analytics, and automated incident detection. For women's safety, the system can incorporate advanced AI algorithms to detect potential threats, flag suspicious activities, and immediately notify law enforcement or safety helplines like 1090 (Women Power Line).
	Department	Urban Development, Transport, Traffic Police and Women & Child Welfare, Women Helpline (1090)
	Sector	Public Safety and Law Enforcement

4.	Problem Statement Title	AI-based model for Crop Damage Assessment against Natural Disasters like floods, hailstorms, thunderstorms etc.
	Description	Agriculture is a critical sector in Uttar Pradesh, contributing significantly to the economy and livelihoods, particularly in rural areas. However, crops are highly vulnerable to natural disasters such as floods, hailstorms, and thunderstorms, which can cause extensive damage, impacting farmers' incomes and food security. Accurate and timely crop damage assessment is essential for disaster response, insurance claims, and policies, but traditional methods are slow, difficult, and often inaccurate. An AI-based Crop Damage Assessment Model leverages advanced technologies like satellite imagery, drone data, and machine learning (ML) algorithms to provide real-time, accurate assessments of crop damage.
	Department	Office of Relief Commissioner (ORC), Revenue Department
	Sector	Rahat to Farmers (Disaster Management)

5.	Problem Statement Title	Consolidation of land using AI-based Algorithms to augment the Chakbandi process in Uttar Pradesh.
	Description	The Consolidation of Land using AI-based Algorithms aims to enhance the traditional Chakbandi process in Uttar Pradesh, which involves the reorganization of fragmented agricultural land into more manageable and productive plots. The Chakbandi process, while essential for improving land efficiency, has historically been slow and complex. By integrating AI-based algorithms, the consolidation process can be automated, accelerating decision-making and optimizing land redistribution based on factors like land quality, proximity, and usage patterns. AI algorithms can analyze satellite data, historical land records, and current land conditions to suggest optimal land consolidation plans. This approach promises to reduce human errors, improve efficiency, and ensure fairer distribution of land among farmers, ultimately boosting agricultural productivity and rural development.
	Department	Chakbandi Directorate, Revenue Department
	Sector	Chakbandi (Consolidation of Land Parcels)

6.	Problem Statement Title	AI-based application for Auto-Measurement of land area.
	Description	An AI-based application for auto-measurement of land area utilizes advanced technologies like satellite imagery, GPS, and machine learning algorithms to accurately measure and map land parcels. Traditionally, land measurement has been a manual process, often prone to errors and delays. The AI application automates this process by analysing geospatial data and identifying land boundaries with high precision. By using real-time satellite data and GPS coordinates, it can provide instant measurements of land area without the need for physical surveys.
	Department	Board of Revenue
	Sector	Land Administration and Revenue

	Problem Statement Title	AI-based solution for the farmers to help in improving their productivity and yield.

7.	Description	An AI-based solution for farmers aims to enhance agricultural productivity and yield by providing data-driven insights and precision farming tools. Traditional farming practices often rely on weather patterns, intuition, and manual observation, which can be inefficient and lead to suboptimal crop production. By integrating AI, machine learning, and data analytics, this solution offers a more scientific and optimized approach to farming.
	Department	Department of Agriculture
	Sector	Agriculture

8.	Problem Statement Title	Optimizing Doctor Availability and Appointment Allocation in Hospitals through Digital Technology and AI Integration.
	Description	Optimizing Doctor Availability and Appointment Allocation in hospitals through Digital Technology and AI Integration aims to address inefficiencies in healthcare systems, particularly the long waiting times and mismatched doctor-patient schedules. In many healthcare facilities, patient appointments are often poorly managed, leading to overcrowding, underutilized resources, and frustrated patients. AI and digital tools can help streamline these processes by intelligently matching patient needs with doctor availability.
	Department	Department of Medical Health & Family Welfare
	Sector	Health

9.	**Problem Statement Title**	Using existing CCTV networks for crowd management, crime prevention, and work monitoring using AI/ML.	
	Description	Using existing CCTV networks for crowd management, crime prevention, and work monitoring with AI/ML integration enhances the functionality of surveillance systems by adding real-time intelligence and predictive capabilities. Traditionally, CCTV networks have been used for passive observation, but with AI and machine learning, these systems can proactively identify threats, detect unusual behaviour, and automate responses to improve security and efficiency.

AI-powered systems analyze live video feeds from CCTV cameras, enabling them to recognize patterns, detect faces, identify suspicious activities, and even predict potential risks based on historical data. For crowd management, AI can analyze crowd density, movement patterns, and potential overcrowding in public spaces or events, triggering alerts for preventive actions. This helps authorities intervene before situations escalate.

In crime prevention, AI algorithms can identify criminal activities such as theft, vandalism, or unauthorized access by detecting abnormal behavior, unusual movements, or patterns of interest. For instance, if a person enters a restricted area or acts suspiciously, the system can send immediate alerts to security personnel.

For work monitoring, AI can track employee activities, ensure safety protocols are followed, and improve workflow efficiency in construction sites, factories, or workplaces by detecting risky behaviors and accidents in real time.

Integrating AI/ML with existing CCTV infrastructure allows for a more intelligent and responsive surveillance system, reducing human errors, enhancing safety, and enabling authorities to make informed decisions quickly. This approach maximizes the potential of existing infrastructure, offering significant cost savings while improving overall security and operational efficiency. | |
| | **Department** | Police Department | |
| | **Sector** | Public Safety, Security, Threat Intelligence and Smart City | |

10.	Problem Statement Title	AI-Assisted Tele-medicine KIOSK for Rural areas.
	Description	An AI-assisted Tele-medicine Kiosk for rural areas aims to bridge the healthcare access gap by providing remote medical consultations to underserved populations. In rural areas, access to healthcare professionals is often limited due to factors like distance, lack of infrastructure, and shortage of medical practitioners. Tele-medicine kiosks equipped with AI and digital technology enable patients to consult with doctors remotely, receive diagnoses, and get prescriptions without traveling long distances.
	Department	Department of Medical Health & Family Welfare
	Sector	Health

11.	Problem Statement Title	Implement AI to predict and manage natural disasters (floods, droughts) by analysing weather patterns, satellite imagery, and historical data for proactive response planning.
	Description	Implementing AI to predict and manage natural disasters such as floods and droughts involves using advanced technologies to analyze large volumes of data, including weather patterns, satellite imagery, and historical records, to forecast potential risks and support proactive response planning. Traditional disaster management systems often rely on limited data and delayed predictions, making it difficult to act before disasters strike. AI-based solutions can enhance disaster preparedness by providing more accurate and timely forecasts.
	Department	Office of Relief Commissioner (ORC), Department of Revenue
	Sector	Disaster Management

12.	Problem Statement Title	Implement AI to monitor the health of critical infrastructure like roads, bridges, and buildings to predict maintenance needs and prevent accidents.
	Description	Implementing AI to monitor the health of critical infrastructure like roads, bridges, and buildings aims to improve safety, extend the lifespan of structures, and reduce the risk of accidents by predicting maintenance needs. Traditional infrastructure management relies on periodic inspections, which can be time-consuming, costly, and prone to human error. AI-based systems, however, can provide continuous, real-time monitoring, offering more accurate insights and enabling proactive maintenance.
	Department	Public Works Department
	Sector	Disaster Management

13.	Problem Statement Title	Design AI tools to personalize learning for students in public schools by identifying skill gaps and recommending tailored content.
	Description	Designing AI tools to personalize learning for students in public schools involves using advanced algorithms to assess each student's individual learning needs, identify skill gaps, and recommend tailored content that aligns with their learning pace, style, and strengths. Traditional classroom settings often follow a one-size-fits-all approach, which may not be effective for all students, especially those with varying academic levels and learning speeds. AI-powered personalized learning solutions address this issue by providing dynamic, individualized educational experiences.
	Department	Education Department
	Sector	Education

14.	Problem Statement Title	Build an AI model to identify and block phishing attempts, ransomware, and other malware targeting state employees and citizens.
	Description	Building an AI model to identify and block phishing attempts, ransomware, and other malware targeting state employees and citizens involves leveraging machine learning and advanced security protocols to detect, prevent, and respond to cyber threats in real-time. State employees and citizens are often prime targets for cyberattacks, and traditional security measures like firewalls or antivirus programs can be insufficient to handle increasingly sophisticated threats. An AI-based model can enhance cybersecurity by proactively identifying malicious activity and preventing successful attacks.
	Department	Department IT & Electronics
	Sector	Cybersecurity

15.	Problem Statement Title	Implement an AI-based system to monitor employee behaviour and detect suspicious activities that could indicate insider threats.
	Description	Implementing an AI-based system to monitor employee behavior and detect suspicious activities that could indicate insider threats involves leveraging machine learning algorithms and behavioral analytics to analyze patterns of activity within an organization's network. Insider threats, which are security risks originating from within an organization, often involve employees or contractors who have authorized access to sensitive information or systems. These threats can be difficult to detect using traditional security measures since the attacker is already trusted within the system.
	Department	Department IT & Electronics
	Sector	Cybersecurity

16.	Problem Statement Title	Use AI to assist in post-incident forensic analysis by identifying the attack vector, compromised assets, and timeline of a cybersecurity breach.
	Description	Using AI to assist in post-incident forensic analysis involves leveraging advanced machine learning algorithms and data analytics to quickly and accurately identify the attack vector, compromised assets, and the timeline of a cybersecurity breach. Traditional forensic analysis often relies on manual methods, which can be time-consuming and error-prone. AI-enhanced tools can automate and streamline this process, enabling faster and more thorough investigations. Once a cybersecurity breach occurs, AI systems can analyze large volumes of data from various sources such as network logs, endpoint activity, server communications, and security alerts. By correlating and analyzing this data in real-time, AI can identify the attack vector, which is the method through which the attacker infiltrated the system, whether through phishing, malware, vulnerabilities, or other tactics.
	Department	Department IT & Electronics
	Sector	Cybersecurity & Cyber Threats

17.	Problem Statement Title	Implement AI-based Applications for TB (tuberculosis) Patients.
	Description	Implementing AI-based applications for tuberculosis (TB) patients can significantly enhance early diagnosis, treatment management, and monitoring, leading to better patient outcomes and improved healthcare efficiency. Tuberculosis remains a major global health challenge, with millions of people affected each year, especially in low- and middle-income countries. Traditional methods of diagnosing and monitoring TB can be slow and resource-intensive, creating barriers to timely care.
	Department	Department of Medical Health & Family Welfare
	Sector	Health

18.	Problem Statement Title	Design AI-based drones and robotics solutions that can handle medical emergencies, search and rescue operations etc.
	Description	Designing AI-based drones and robotics solutions for medical emergencies and search-and-rescue operations can significantly enhance the effectiveness, speed, and safety of critical response efforts. These technologies have the potential to save lives, reduce human risk, and provide real-time data for better decision-making in emergencies, especially in situations where time is crucial, such as natural disasters, accidents, or terrorist attacks.
	Department	Department of Revenue
	Sector	Disaster Management

19. Problem Statement	
Title	**Open Problem Statement**
Description	If you have an innovative idea or a problem statement that doesn't fit into any of the existing categories, you can register it as an open problem. This is your opportunity to bring your unique vision to the table and showcase your creativity by addressing challenges outside the predefined scope.
Department	**Open Problem**
Sector	**Multidisciplinary**