

## **Deep Tech Problem statement**

1. Create a machine learning solution to detect and mitigate deepfake videos on the internet.

About - Develop a robust machine learning solution that employs a combination of facial recognition, voice analysis, and video forensics to identify and flag potential deepfake videos on various online platforms. The system should provide real-time monitoring, and when a deepfake is detected, it can either alert moderators for manual review or apply a watermark to highlight the video's potentially manipulated content, ensuring that users are aware of its authenticity. This solution aims to combat the spread of disinformation and safeguard the integrity of online media.

2. Build a deep learning model for sentiment analysis that can understand and analyze nuanced emotions expressed in text and social media content.

About : Develop a sophisticated deep learning model for sentiment analysis that excels in comprehending and evaluating nuanced emotions and subtleties expressed in text and social media content. This model should offer a more nuanced understanding of sentiment beyond simple positive/negative classifications, enabling better insights into public opinion and attitudes.

3. Design an AI-powered autonomous vehicle that can navigate complex traffic scenarios and interact safely with pedestrians and other vehicles.

About : Create an AI-driven autonomous vehicle system capable of safely navigating intricate traffic situations while interacting with pedestrians and other vehicles. This system should prioritize safety, efficient traffic flow, and smooth communication with its surroundings to ensure a seamless integration of autonomous vehicles into existing transportation infrastructure.

4. Create a deep tech solution for early detection and prediction of disease outbreaks, improving public health responses

About - Develop a real-time, AI-driven disease outbreak monitoring system that analyzes various data sources, including healthcare records, social media, and environmental factors. This solution will offer predictive analytics and alert authorities to potential outbreaks, enabling proactive public health interventions and resource allocation to mitigate the spread of diseases.

5. Create a system for real-time monitoring and prediction of climate change impacts using data from remote sensors and satellite imagery.

About - Design an integrated deep tech platform that leverages data from a network of remote sensors and satellites to provide real-time monitoring and predictive analysis of climate change impacts. This system will enable informed decision-making for disaster preparedness, resource allocation, and mitigation efforts in response to changing environmental conditions

6: Develop a neural network-based recommendation system that can provide highly personalized content recommendations in real-time.

About : Build a neural network-driven recommendation system that delivers real-time, highly personalized content recommendations. This system should utilize deep learning to understand

user preferences, optimize content suggestions, and adapt to changing interests, providing a more engaging and tailored user experience.

### **Agritech Problem statement**

1. Create AI-driven predictive models for crop yield forecasting, helping farmers plan their harvest and optimize resource allocation.

About : Develop AI-powered predictive models to accurately forecast crop yields, providing farmers with valuable insights to plan their harvests and optimize the allocation of resources such as water, fertilizers, and labor.

2. Develop a mobile app for small-scale farmers in emerging markets that offers weather forecasts, market prices, and agricultural best practices.

About : Develop a mobile app tailored for small-scale farmers in emerging markets, providing access to real-time weather forecasts, market prices, and expert agricultural best practices to enhance their productivity and decision-making capabilities.

3. Develop AI-powered systems for early detection and management of livestock diseases, improving animal health and productivity.

About : Develop AI-powered systems for the early detection and management of livestock diseases, with the aim of enhancing animal health and productivity in the agricultural sector.

4. Develop a technology solution to reduce post-harvest losses by improving storage, transportation, and processing of agricultural products.

About : "Develop a technology solution aimed at reducing post-harvest losses by enhancing the storage, transportation, and processing of agricultural products in order to improve the efficiency and sustainability of the agricultural supply chain."

5. Create a mobile app for consumers that provides information on the environmental impact and sustainability of food products, helping them make informed choices.

About: Create a mobile app for consumers that offers information on the environmental impact and sustainability of food products, empowering them to make informed choices and support sustainable consumption.