

# **AI-Based Inventory & Demand Forecasting Platform**

## **Theme**

Smart & Resilient Supply Chains

## **Idea Sector**

Services, Education, Hospitality, Media, Publishing, Entertainment, Design, Wellness, Logistics, Sports and any related sub-sector

## **Title of Proposed Idea/Innovation**

AI-Based Inventory & Demand Forecasting Platform

## **Problem Statement**

MSMEs often face inefficiencies in inventory and demand planning, resulting in overstocking, stockouts, and wastage-especially during fluctuating demand seasons. Lack of access to advanced forecasting tools forces many to rely on manual or intuition-based decision-making, limiting profitability and supply chain agility.

## **Proposed Solution**

We propose an AI/ML-based demand forecasting platform tailored for MSMEs. Delivered as a responsive web-based system accessible via desktop and mobile, the platform leverages historical sales data, seasonal patterns, local events, weather, and market trends to provide accurate demand forecasts. This solution aims to optimize stock levels, reduce wastage, improve profitability, and enable smarter supply chain decisions.

## **Newness and Uniqueness of the Innovation**

This solution is uniquely tailored for MSMEs, integrating contextual local data-such as festivals, weather changes, and regional events-into its AI-driven forecasts. Unlike large enterprise tools, it is designed to be simple, accessible, and low-cost, with a mobile-friendly interface. The use of lightweight AI models ensures it runs effectively even with limited datasets. Its user-centric design and focus on affordability distinguish it from mainstream forecasting solutions.

# AI-Based Inventory & Demand Forecasting Platform

## Key Considerations

- Accessibility: Mobile and web-based interface for MSME ease-of-use.
- Affordability: Low-cost, freemium model ensuring wide adoption.
- Data Privacy: End-to-end encryption and secure cloud hosting.
- Minimal Training Required: Simple, intuitive dashboard for non-technical users.

## Key Components & Tools (Brief)

- Data Collection: Sales history, local events, weather APIs
- Forecasting Models: ML algorithms like XGBoost, Prophet
- Frontend: Streamlit or React for simple UI
- Backend: Python for data processing
- Deployment: Cloud-based (AWS/Azure)

## Market Potential

With over 63 million MSMEs in India, this solution addresses a massive untapped market. Most MSMEs still lack access to intelligent forecasting tools. Our affordable, easy-to-use platform can be monetized through freemium subscriptions, analytics services, and licensing. As India pushes digital transformation in the MSME sector, this solution is positioned for high demand and scalable business growth.