AI-Powered Demand Forecasting Tool

# Problem Statement

Small retailers often struggle to accurately predict how much stock they need. This results in frequent cases of overstock (leading to capital loss and spoilage) or shortages (leading to lost sales and dissatisfied customers). Manual estimation of demand is error-prone and time-consuming.

# Solution

The proposed solution is an AI-powered tool that leverages past sales data, seasonality, and trends to generate demand forecasts for each product. The tool provides interactive dashboards with charts comparing past and forecasted sales, confidence indicators, and simple reorder recommendations. Retailers can quickly assess their inventory needs and take proactive steps to avoid shortages or excess stock.

# Summary

This AI-powered demand forecasting tool empowers small retailers by enabling data-driven inventory management. With easy-to-use dashboards and visualizations, businesses can predict product demand more accurately, reduce wastage, and improve customer satisfaction. The solution is impactful, hackathon-friendly, and extensible to include advanced features like supplier lead-time integration, anomaly detection, and pricing optimization.