

Proposed Solution Document

Project Name: DemandEst- AI Powered Food Demand Forecaster

S.No	TOPIC	CONTENT
1.	Problem Statement	A food delivery company needs an appropriate machine learning model to accurately forecast daily and weekly demand, number of orders to gather raw materials because there is a risk of wastage and not enough could lead to out of stocks and push customers to seek solutions.
2.	Solution	<ul style="list-style-type: none">✓Develop software to forecast the food demands for a week or 15 days.✓Use Machine learning model that help to make efficient balance between the order demand and planned courier service.✓Store the leftover food materials properly to avoid risk of wastage.✓Determine the demand and then place order.✓Use efficient tools for predicting the risk of wastage and over stocking problem.✓Track sales with POS system that helps to decide how much stock needs to buy.
3.	Business Model	<p>The replenishment of raw materials is done only weekly and since the raw material is perishable, the procurement planning is of utmost importance.</p> <p>Therefore predicting the demand helps in reducing the wastage of raw materials which would result in the reduced cost of operation. Increased customer satisfaction by timely fulfilling their expectations and requirements.</p>
4.	Novelty	AI powered demand forecasting is the strongest method by which to grow revenue and increase profit. The increased accuracy that AI demand forecasts provides results in precise future replenishment quantity predictions. This data reduces missed sales opportunities through stock outs, and also reduces waste, which both directly impact overall profits.

5.	Scalability of Solution	<p>Most demand forecasting solutions focus on small to medium-sized applications that offer low scalability. However, modern food industry businesses are highly diversified in the products that they provide through large chains of network stores. This scale of business presents a significant challenge for traditional demand forecasting software, which is why startups are providing cloud-based solutions geared towards large-scale operations.</p>
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