Project Design Phase-I
Proposed Solution

Date	19 September 2022
Team ID	PNT2022TMID22680
Project Name	Project – DemandEst – AI powered Food Demand Forecaster
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The replenishment of majority of raw materials is done on weekly basis and since the raw material is perishable,the procurement planning is of utmost importance.Secondly, staffing of the centers is also one area wherein accurate demand forecasts are really helpful.
2.	Idea / Solution description	As an alternative to the traditional demand forecast format, there are opportunities to use market and AI data to assist managers in the S&OP (Sales & Operations Planning) process, as well as in the S&OE (Sales and Operations Execution) process. Perception, Representation& Reasoning, Learning, Human AI interaction and societal impact.
3.	Novelty / Uniqueness	The use of AI through machine learning techniques associated with a coherent technological stack of analytics. Provides greater information speed, data organization with different granularities (region, state, city and neighborhood), adjustments seasonality, exploration of opportunities and decision making in real time.
4.	Social Impact / Customer Satisfaction	• Inventory optimization among Distribution Centers (CDs) • Reduction of idle stocks • Decrease in disruptions that cause loss of market share due to substitute products • Direct reduction in losses with perishability (FIFO).

5.	Business Model (Revenue Model)	A web application is built which is integrated with the model built. Forecasting can be used in supply chain management to ensure that the right product is at the right place at the right time. Delicious Data enables AI-based Demand Forecasting 1) Google ads- ads can be displayed in the application 2) Subscription – Subscription can be provided to access specific features.
6.	Scalability of the Solution	Performing machine training with data from the past alone will cause the machines to replicate the same mistakes and successes of the past, especially in terms of pricing, so the goal should be to create hybrid models that help AI replicate with more intensity and emphasis the desired behaviors of the management strategy. A scalable AI solution has to work with data in real-time as it is being generated and sometimes to the tune of millions of records on a daily basis.