**Project Design Phase-I**

**Proposed Solution Template**

|  |  |
| --- | --- |
| Date | 9 October 2022 |
| Team ID | PNT2022TMID00524 |
| Project Name | DemandEst - AI powered Food Demand Forecaster |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to be solved) | A food delivery service has to deal with a lot of perishable raw materials which makes it all, the most important factor for such a company is to accurately forecast daily and weekly demand. Too much inventory in the warehouse means more risk of wastage, and not enough could lead to out-of-stocks - and push customers to seek solutions from your competitors. 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, the task is to predict the demand for the next 10 weeks. The main aim of this project is to create an appropriate machine learning model to forecast the number of orders to gather raw materials for next ten weeks. To achieve this, we should know the information about of fulfilment Center like area, city etc., and meal information like category of food sub category of food price of the food or discount in particular week. By using this data, we can use any classification algorithm to forecast the quantity for 10 weeks. A web application is built which is integrated with the model built. |
| 2. | Idea / Solution description | This section describes the model developed to solve the stated aggregate production planning problem. Prior to this project, the company has already reviewed its demand forecasting process that now provides reliable aggregate monthly demand forecasts for production planning. Demand forecasts and the other input data as costs and production rates should be carefully estimated; otherwise, the results achieved by the aggregate production planning model will be useless |
| 3. | Novelty / Uniqueness | * Artificial intelligence * Machine learning |
| 4. | Social Impact / Customer Satisfaction | Customer ( help to predict food requirement ,and satisfy the customer) |
| 5. | Business Model (Revenue Model) | Predictive Model. |
| 6. | Scalability of the Solution | It performs the detection in an accurate manner. It works efficiently. |