

Problem Statement: Smart Bag Creator Challenge for Flipkart Grocery

Forgot to order fresh coriander or your favorite box of strawberries or tomatoes while placing your weekly grocery order online? Wondering that you'll need to place another small order for the items missed? Well, that's something all of us have faced while ordering online, and that's what this challenge attempts to solve! In this challenge, teams are required to create a smart bag that, based on past order history, can predict future orders and create a smart order basket for the customer - selecting the items required in advance and enabling a faster buying experience.

Examples:

1. *Identify repeat purchase options, if any - This should be aware of item / brand mapping (For e.g., 5 kg Basmati Rice bought every month - May be different brands with some recurring ones) - Tomatoes bought every week etc*
2. *Based on the time of opening of app and past order history, create a smart basket with items already added in the smart bag*
3. *User must be able to move items from Smart bag onto his own cart in an easy manner*
4. *Ability to nudge to buy a bigger / profitable basket (by nudging a bigger packet, advertised items, higher margin items etc) is a plus*

Deliverables/Expectations for Level 2 (Online Problem Statement Idea Brief Submission)

Deliverable 1:

A scalable algorithm/approach with block diagram and detailed explanation to achieve the below:

Given a set of users and their order history:

1. Identify repeat purchase products for all users along with the frequency with which they are repeating
2. Identify groups of users who showcase similar buying needs
3. Create a smart basket for every user based on the following inputs:
 - a. Time of Visit
 - b. Past Purchases
 - c. Relevant products purchased by similar users
4. Building for New users with no purchase history would be given extra points

Assume that user browse history and order history would be available to you from Flipkart's platform

Deliverable 2:

Design a robust, responsive and performant Progressive Web Application to showcase the list of products (Smart Bag) derived from Deliverable #1 with the following capabilities:

1. User must be able to move items from Smart bag to the Cart in an easy manner
2. Ranking of these products should be dependent on the relevance of the product to the user.
3. [Optional] Nudges to add additional products
 - a. Bigger Pack Sizes
 - b. Free Sponsored Products