

| Test Case ID | Story/Task   | Test Description  | Expected Outcome   | Actual Outcome             | Pass/Fail |
|--------------|--|---|--|----------------------------|-----------|
| TC-3.1.1     | US 3.1: Machine Learning-Based Recommendation Engine | Verify that recommendations update and improve after user interactions.                           | Recommendations become more relevant after repeated user interactions.                         | Recommendations improved.  | Pass      |
| TC-3.1.2     | US 3.1: Machine Learning-Based Recommendation Engine | Test the accuracy and relevance of recommendations after model training with interaction data.    | ML model provides relevant and personalized recommendations over time.                         | Accurate and relevant.     | Pass      |
| TC-3.2.1     | US 3.2: Smart Filters                                | Validate that the filter options for food type, cost, weather, and proximity are functional.      | Users can apply filters, and recommendations update accordingly.                               | Filters applied correctly. | Pass      |
| TC-3.2.2     | US 3.2: Smart Filters                                | Test combinations of multiple filters to ensure recommendations respect all applied filters.      | Recommendation list updates to reflect all selected filters.                                   | All filters functional.    | Pass      |
| TC-3.3.1     | TS 3.1: Notification System                          | Verify that notifications are triggered when price changes occur in real-time.                    | In-app notifications appear promptly when a price change occurs.                               | Notifications triggered.   | Pass      |
| TC-3.3.2     | TS 3.1: Notification System                          | Test if notifications are sent only for relevant price changes based on user preferences.         | Notifications align with the user's selected criteria for price changes.                       | Relevant notifications.    | Pass      |
| TC-3.4.1     | TS 3.2: Machine Learning Model Integration           | Test the integration of the ML model and its ability to update recommendations dynamically.       | ML model processes user interaction data and adjusts recommendations without errors.           | Model integrated well.     | Pass      |
| TC-3.4.2     | TS 3.2: Machine Learning Model Integration           | Validate that interaction data is correctly collected and fed into the ML model for training.     | User interaction data is accurately logged and used to refine recommendations.                 | Data logged accurately.    | Pass      |
| TC-3.5.1     | TS 3.3: Filter Logic Implementation                  | Test the implementation of filter logic to ensure the recommendation engine updates in real-time. | Recommendation list updates dynamically based on applied filters.                              | Filter logic functional.   | Pass      |
| TC-3.5.2     | TS 3.3: Filter Logic Implementation                  | Test if filters persist correctly across different sessions or recommendation views.              | Filters remain active until cleared by the user, and recommendations stay updated accordingly. | Filters persisted.         | Pass      |