## **Feature Selection Report**

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This stage involves identifying the most relevant features from the processed data that will contribute to the effectiveness of the app's algorithms. The Feature Selection Report outlines the criteria and methodology used to choose these features, such as nutrient profiles, user dietary preferences, health goals, and activity levels. It details the process of evaluating the importance of each feature, using techniques like correlation analysis, statistical tests, and machine learning methods to ensure that the selected features provide meaningful input for the model. The goal is to focus on variables that significantly impact nutritional outcomes and user experiences.

## **Feature Selection Process**

The feature selection process involved several steps:

- 1. **Data Collection**: Gathering a diverse dataset of user profiles, dietary habits, nutritional values, and health outcomes.
- 2. **Feature Extraction**: Identifying a broad set of potential features from the dataset.
- 3. **Model Training**: Using Gemini Pro to evaluate the importance of each feature in predicting key outcomes.
- 4. **Feature Evaluation**: Analyzing feature importance scores and performing cross-validation to ensure reliability.