FUNCTIONAL REQUIREMENTS:

Here are some functional requirements for the meal plan recommendation app:

-Meal Recommendation: The app should recommend meals to the user based on their preferences and dietary restrictions. Meal recommendations should be created by the artificial intelligence engine and personalized according to the user's needs.

-Creating Meal Plan: The app should allow the user to create a meal plan based on suggested meals. The user should be able to set the duration of the meal plan and add or remove meals.

-Nutrition Information: The app should provide nutritional information such as calorie count, macronutrient breakdown and ingredient list for each meal recommendation.

-Feedback Mechanism: The app should allow users to provide feedback on meal suggestions and meal plans. This feedback can help improve the AI engine's recommendations.

-Integration with External Applications: The application must be able to integrate with external applications such as fitness trackers, health applications or market applications to provide a more immersive experience to the user.

-User Profile: The application should allow the user to create and edit their profile, including dietary preferences, restrictions and any food allergies.

-Notifications: The app should send notifications to remind the user to follow the meal plan and suggest new meals based on their preferences.

-Search Functionality: The app should provide a search function for users to search for food based on keywords or content.

-Sharing Functionality: The app should allow users to share their meal plans and meal recommendations with others on social media or via email.

These are just some of the functional requirements of an meal plan recommendation app. Additional requirements may include a meal history feature, meal customization options, and more.

NON-FUNCTIONAL REQUIREMENTS:

Non-functional requirements for a meal plan recommendation app could include:

-Performance: The app should be able to quickly generate meal plans based on user preferences and dietary restrictions. It should be able to handle a large number of users at the same time without slowing down or crashing.

-Reliability: The app should be able to generate accurate meal plans that meet the user's dietary requirements consistently. It should also be able to handle errors and exceptions gracefully.

Security: The app should protect user data, such as dietary preferences and health information, from unauthorized access and ensure that the data is stored securely.

Usability: The app should be easy to use and navigate, with a simple and intuitive interface. It should also be accessible to users with disabilities.

Scalability: The app should be able to handle an increasing number of users and data over time, without sacrificing performance or reliability.

Maintainability: The app should be easy to maintain and update, with clean and well-documented code. It should also be easy to troubleshoot and fix any issues that arise.