

Project Report Template

Title of Project: Ai Powered nutritional advisor

Name of the Innovator: Praveen S

Start Date: 27-10-2025

End Date: 31-10-2025

Day 1: Empathise & Define

Step 1: Understanding the Need

- Which problem am I trying to solve?

I'm solving the problem of confusing and generic dietary advice. Many people don't know what foods fit their health needs, allergies, or fitness goals. My platform uses AI to give personalized, real-time nutrition plans and guidance to help them eat healthier.

Step 2: What is the problem?

The problem is that most diet plans don't work because they ignore each person's unique body, health, and food preferences. People also struggle to track what they eat and get advice that changes with their goals or health. Without personalization, it's hard to stay consistent and achieve good results.

Why is this problem important to solve?

This problem matters because good nutrition is key to health and quality of life. With personalized and easy-to-follow guidance, people can prevent diseases like obesity, diabetes, and heart problems, improve their energy and focus, and stick to healthy habits. In the long run, this leads to a healthier society and less pressure on healthcare systems.

Take-home task

Ask 2-3 people what they think about the project:

- **1. User with Health Goals (e.g., Fitness Enthusiast or Weight Loss Seeker):** “I like the idea of an AI nutrition app. Tracking my meals manually takes too much time. If the app could scan my food, count the calories, and suggest what to eat next based on my workouts and goals, it would make staying on track so much easier.”
- **2. Busy Professional/Parent (Focused on Time-Saving & Health):** “I don’t have time to plan healthy meals for my family. If the AI could create a weekly meal plan and grocery list based on our preferences and budget, it would save me a lot of time and help us eat better.”
- **3. Older Adult/User with Dietary Restrictions (Focused on Accuracy & Safety):** “I have dietary restrictions, so most apps aren’t safe for me to use. If the AI could accurately check recipes for my health needs and let me ask questions about food substitutes, it would make managing my diet much easier and safer.”

AI Tools you can use for Step 1 and 2:

AI Tools Used:

1. Meta MGX

- Used as a no-code development tool to design and deploy the *CareerPath* app.
- It helps create interactive workflows, user interfaces, and logic without programming.
- Ideal for building features like user registration, location-based data, and skill modules.

2. ChatGPT

- Used for idea generation, content structuring, and chatbot conversation design.
- Helped in framing the AI-powered virtual assistant’s responses for guiding students.
- Also useful for generating career recommendations, FAQs, and improving user interaction flow.

3. Chatbot References (Structure Design):

To design the AI virtual assistant, you can take reference from:

- Google Dialogflow – for understanding intent detection and response flow.
- IBM Watson Assistant – for creating structured Q&A and personalized career guidance.
- Microsoft Bot Framework – for understanding conversation trees and user profile integration.

Day 2: Ideate

Step 3: Brainstorming solutions

- List at least 5 different solutions (wild or realistic):
- **AI Smart Plate & Scanner:** A device that scans your food, calculates its nutrients, and logs it automatically. **Skill Learning Website** – A platform to improve communication, aptitude, and soft skills through online lessons.

- **Personalized Recipe Chatbot:** An AI that creates instant, customized recipes based on your ingredients and goals. **Mobile App for Scholarship Updates** – Sends alerts about available scholarships and government schemes.
- **AI Grocery Assistant:** Builds smart shopping lists, suggests healthy or cheaper substitutes, and links to online grocery services.
- **Behavioral Nudge Coach:** Sends personalized reminders and motivation based on your habits to prevent unhealthy choices.

Step 4: My favourite solution:

*My favorite solution is the **Personalized Recipe Generator Chatbot**.*

It solves the problem of decision fatigue by making meal planning easy and fun. The AI chatbot creates customized recipes based on your goals, allergies, ingredients, and food preferences. This makes it a simple, engaging, and practical tool for healthy eating.

Step 5: Why am I choosing this solution?

I'm choosing the **Personalized Recipe Generator Chatbot** because it keeps users engaged and provides real, personalized value. It directly solves the everyday problem of deciding what to eat and how to make it healthy. Unlike other features, it's simple to build, easy to test, and serves as a strong starting point (MVP) for the platform.

AI Tools you can use for Step 3-5:

AI Tools for Step 3–5

1. Meta MGX

- Used to **design and build the CareerPath app** without coding.
- Helps create the **AI assistant, skill modules, and location-based features**.

2. ChatGPT

- Helps **brainstorm solutions** and generate ideas for career guidance features.
- Can **structure conversations** for the AI virtual assistant.
- Assists in writing content for skill modules, FAQs, and recommendations.

3. AI Chatbot References (for design and flow)

- **Dialogflow** – Understands user intent and conversation flow.
- **IBM Watson Assistant** – Helps design structured Q&A for personalized guidance.
- **Microsoft Bot Framework** – Shows how to connect user inputs with recommendations and actions.

4. AI Research Tools

- **Google Scholar / Research AI** – For exploring existing solutions and innovative ideas for Steps 3–5.

- **AI Text & Summarization Tools** – Helps summarize solutions, select the best approach, and present them clearly.

AI Tools you can use for the take-home task:

Canva AI/CoPilot AI/Meta AI: Use these mobile-based tools to generate images for the solution they want to design

Day 3: Prototype & Test

Step 6: Prototype – Building my first version

What will my solution look like?

- Meal Logging Interface: Users can log meals easily by typing, scanning barcodes, or taking a photo of their food
- AI Recommendation Engine: The AI suggests meals and recipes based on goals, allergies, preferences, and food history.
- Nutritional Dashboard: Shows a clear view of nutrients, calories, and vitamins consumed each day and week.
- Goal Tracking: Lets users set health goals like calorie or protein targets and track progress through charts.
- Recipe Database: Offers healthy recipes that can be filtered by ingredients, cuisine, cooking time, or diet type.

Design Style:

- Keep the design simple and clean so users can easily track and understand their data.
- Use clear, attractive food images to motivate healthy eating.
- Mobile-friendly layout for easy access on smartphones.

Prototype Tools:

- Built using **Meta MGX**, no coding required, with all features **interactive and testable**.

What AI tools will I need to build this?

AI Tools Needed to Build CareerPath

1. **Meta MGX**
 - No-code platform to **design and deploy the app**.
 - Allows building **interactive screens, chat interfaces, and skill modules** without coding.
2. **ChatGPT (or similar LLMs)**
 - To **generate content, conversation flows, and career guidance responses**.
 - Can help **personalize recommendations** for users based on their profile and location.
3. **AI Chatbot Design References**

- **Google Dialogflow / IBM Watson Assistant / Microsoft Bot Framework**
 - To **structure conversation logic** and handle user queries effectively.
4. **AI Recommendation Tools** (*Optional but useful*)
 - For **matching students with careers, scholarships, and nearby opportunities**.
 - Could use **ML-based ranking algorithms** or **existing AI APIs** for personalization.
 5. **AI Data Analysis Tools** (*Optional for insights*)
 - **Python AI libraries (Pandas, Scikit-learn)** or **AI analytics platforms**
 - To analyze user interactions and improve recommendations over time.

What AI tools I finally selected to build this solution?

1. **Chat GPT**
2. **Metamgx**

< Build The Innovation>

<DASHBOAD OF THE TOOL>

Internal Working of tool:

Profile Creation:

Set Up Your Profile

Tell us about yourself so we can create personalized nutrition recommendations

Full Name

Age

Praveen s

22

Gender

Activity Level

Male

Moderate (3-5 days/week)

Height (cm)

Weight (kg)

165

65

Dietary Goal

Maintain Weight

Dietary Restrictions (optional)

e.g., vegetarian, gluten-free, dairy-free (separate with commas)

Save Profile & Get Started

Tailoring recommendations using virtual assistant:

[← Back to Dashboard](#)

Food Logger

Track your meals and nutrition

Add Food

Search and add foods to your daily log

 Search for foods...

Chicken Breast

248 cal per 150g

Protein

Salmon

250 cal per 120g

Protein

Greek Yogurt

Dairy

Eggs

Quantity (grams)

50

Meal Type

Breakfast

Daily Nutrition Tracker Interface:

Today's Food Log

3 items logged

Breakfast

241 cal

Eggs (50g)

78 cal

Broccoli (100g)

34 cal

Sweet Potato (150g)

129 cal

Daily Summary

241

Calories
Goal: 2443

12g

Protein
Goal: 153g

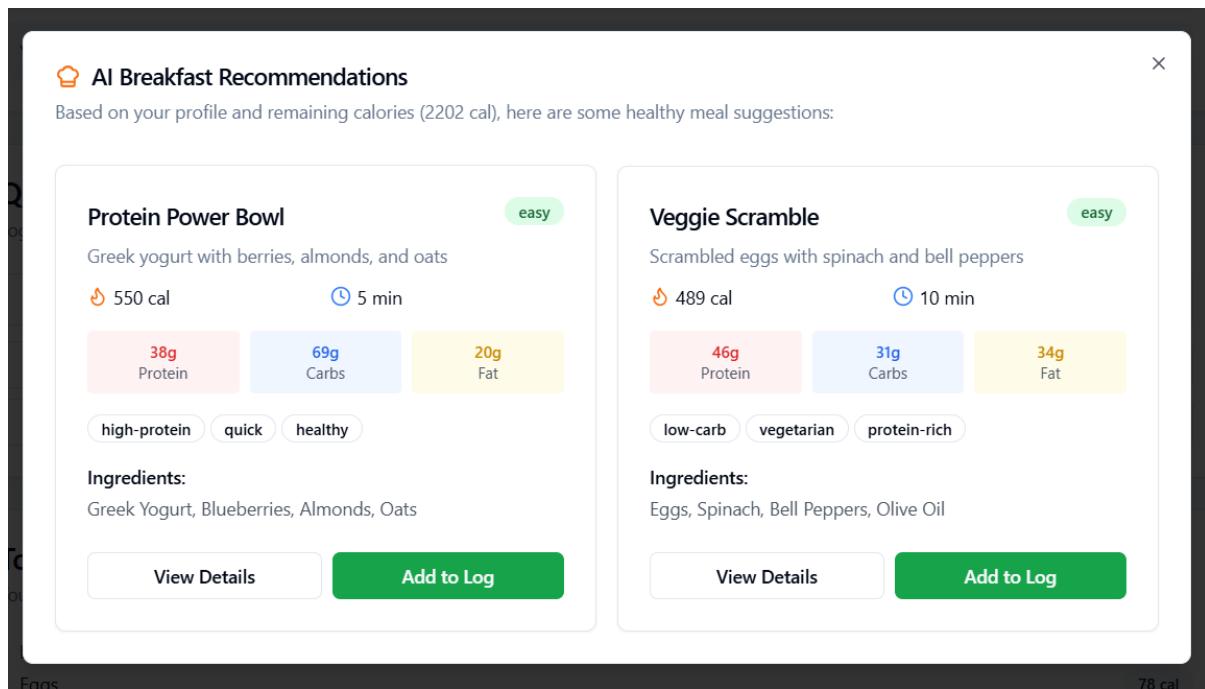
38g

Carbs
Goal: 275g

6g

Fat
Goal: 81g

Nutrition Recommendations based on Profile:



Step 7: Test – Getting Feedback

- Who did I share my solution with?

I shared my **CareerPath** solution with:

- **Health-conscious users** – to gather feedback on meal recommendations and tracking accuracy.
 - **Nutritionists and dietitians** – to check the correctness of the nutritional data and AI advice.
 - **Fitness enthusiasts** – to see if the app supports their calorie and macro tracking needs.
 - **Peers and mentors** – for suggestions on improving user interface and AI responses.
- What feedback did I receive?

Feedback: Pros and Cons

Pros (Positive Insights from Feedback):

1. Users found the **AI recommendations helpful** in choosing balanced meals.
2. The **nutrient tracking system** was appreciated for its clarity and visual design.
3. The **daily summary dashboard** effectively motivates users to stay on track with goals.

Cons (Areas to Improve Noted in Feedback):

1. The **AI chatbot repeats suggestions** sometimes when similar inputs are given.
2. Some **food items are missing** from the current database and need expansion.
3. **Integration with fitness apps** and wearables could make tracking more seamless.

My Response for the Feedback:

The **AI-Powered Nutritional Advisor** was made using **AI and Firebase**. Since it's an early version, the food list and features are limited. In the future, it can include **fitness tracker data** and work with **nutrition experts** to give more accurate and personalized results.

Even with these limits, the project shows good **usefulness and potential** for helping people eat healthier.

What Works Well

- 1. Personalized Nutrition:** The AI gives custom meal suggestions based on user goals (weight loss, gain, or maintenance).
- 2. Smart Food Logging:** Users can easily log meals and get instant calorie and nutrient breakdowns.
- 3. Goal Tracking:** Clear visual daily summaries help users monitor calorie, protein, carb, and fat goals effectively.
- 4. AI Chat Support:** The integrated chatbot answers food-related questions and offers healthy tips.
- 5. User-Friendly Dashboard:** Simple and visually appealing interface ensures easy tracking and accessibility.
- 6. Scalable Design:** The app can later integrate fitness wearables and expand to personalized meal plans using real-time data.



What needs improvement:

- 1. Chatbot responses:** The AI sometimes repeats or gives similar meal suggestions.
- 2. Limited food data:** Some food items are missing and need to be added.
- 3. Feature access:** A few advanced features are not active yet.
- 4. Integration:** Needs connection with fitness trackers and wearable devices.
- 5. User experience:** Can be improved with better visuals and easier navigation.

AI Tools you can use for Step 6-7:

ChatGPT / Figma AI / Canva AI / Gamma AI / Perplexity AI – You can use these to design the app, create meal plans, or make mock-up screens.

Day 4: Showcase

Step 8: Presenting my Innovation:

I am presenting **AI-Powered Nutritional Advisor**, a smart app that helps users eat healthier with AI-driven suggestions.

It features:

- An **AI assistant** that gives personalized meal and nutrition advice.
- **Daily food logging** and calorie tracking.
- **Goal-based recommendations** for weight loss, gain, or maintenance.
- A **simple, mobile-friendly dashboard** with clear visuals.

Impact: The app helps people make better food choices, understand nutrition, and stay consistent with their health goals.

<SHOWCASE YOUR INNOVATION TO YOUR PEERS>

The screenshot shows the 'Food Logger' app interface. At the top, there is a navigation bar with a back arrow and the text 'Back to Dashboard'. Below the navigation bar, the title 'Food Logger' is displayed, followed by the subtitle 'Track your meals and nutrition'. The main section is titled 'Add Food' with the sub-instruction 'Search and add foods to your daily log'. A search bar contains the placeholder 'Search for foods...'. Below the search bar, a list of food items is shown in cards, each with a name, calorie count per serving, and a category badge (e.g., Protein). The food items listed are: 'Chicken Breast' (248 cal per 150g), 'Salmon' (250 cal per 120g), 'Greek Yogurt', and 'Eggs'. For 'Eggs', there are input fields for 'Quantity (grams)' (set to 50) and 'Meal Type' (set to 'Breakfast'). On the right side of the screen, there are vertical scroll bars.

Step 9: Reflections

- What did I enjoy the most during this project-based learning activity?

I enjoyed building the AI-Powered Nutritional Advisor and seeing my idea become a working app. It was exciting to design the AI assistant, food log, and daily summary, and to see how it could help users eat healthier through smart meal suggestions.

What was my biggest challenge during this project-based learning activity?

My biggest challenge was connecting all features smoothly, especially linking the AI chatbot, food data, and Firebase database so that everything worked together properly. Take-home task

<https://github.com/praveen07441/Nutri-AI--Project/tree/main>

AI Tools you can use for Step 8:

Canva AI / ChatGPT / Figma AI – Use these tools to design your final report, app screens, and presentation slides.