



AI-Based Personalized Diet Chart Planner

Intelligent nutrition recommendations tailored to your fitness goals

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Application Overview

Personalized Recommendations

AI-powered meal suggestions based on your profile and fitness goals.

Nutrition Tracking

Automated calorie and macro tracking with real-time dashboard updates.

Health Metrics

BMI, TDEE, and dietary goals calculated from personal information.



Input Form Interface

Users enter personal data to generate customized nutrition plans.

- **Height & Weight**

Foundation for BMI calculation

- **Age & Gender**

Factors in metabolic rate

- **Fitness Goal**

Determines caloric surplus or deficit

The screenshot displays the AI Diet Planner application. At the top, it says "AI Diet Planner" and "Personalized meal recommendations powered by AI". On the right, there's a sidebar titled "AI Nutrition Assistant" with a message: "Hello! I'm your AI nutrition assistant. I help you plan meals, track nutrition, and achieve your bulking goal. How can I help you today?". Below the sidebar, there are sections for meal planning and server logs.

Meal Planning:

- Calories:** 2273 TDEE (cal)
- Protein:** 142g
- Carbs:** 256g
- Fat:** 55g

Food Items:

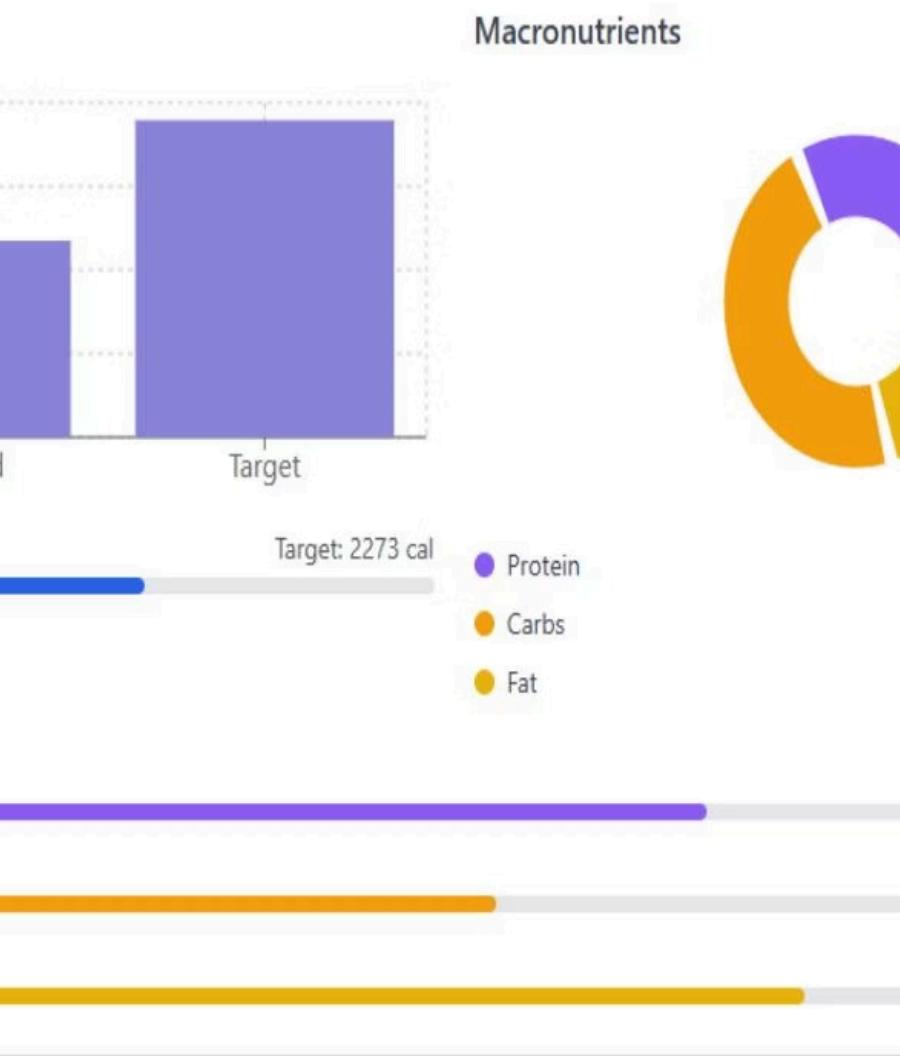
- Rice (Quantity: 1)
- Steak (Quantity: 1)
- Bowl (Quantity: 1)

Ask me anything about nutrition: Tip: ask for structured output by appending recipe in JSON! Example: { "name": "Spaghetti Carbonara", "calories": 350, "protein": 20, "carbs": 50, "fat": 15 }

Server Logs:

```
2025-11-03T10:10:43.101Z + 607 /api/logs
Req: {}
Res: [{"ts": "2025-11-03T10:10:40.421Z", "method": "GET", "path": "/api/logs"}, {"query": {}, "response": "{'logs': []}"}, {"ts": "2025-11-03T10:10:37.418Z", "method": "GET", "path": "/api/logs"}]
```

Nutrition Plan Dashboard



21.9

BMI

Healthy weight range

2273

Daily TDEE
(kcal)

Total energy
expenditure

142g

Protein Target

Daily requirement

256g

Carbs Target

Daily requirement

AI Diet Planner

Personalized meal recommendations powered by AI

2273 TDEE (cal)

142g Protein

256g Carbs

94g Protein

135g Carbs

55g Fat

Rice

- 1 +

Bowl

- 1 +

- 1 +

Greek Yogurt Parfait

Ready in 5 min + 1 servings

Add

Add

AI Nutrition Assistant

Hello! I'm your AI nutrition assistant. I help you plan meals, provide nutrition advice, and support your bulking goal. How can I help you today?

Here's a tailored suggestion based on your goals. Focus on lean protein, whole grains, and healthy fats. If you have a specific question (e.g., 'How many carbs should I eat?'), just ask!

Build me a 3-day bulking plan.

A simple fat loss workout plan: Incorporate strength training (squats, push-ups, rows) and cardio (brisk walking, cycling, swimming). Focus on intensity, overload, and consistency.

Ask me anything about nutrition or fitness.

Tip: ask for structured output by appending "output: true" to your query (e.g., "What's a good meal plan for bulking? output: true"). Example:

Server Logs

```
2025-11-07T18:12:18.432Z +0000 /api/logs
Req: {}
Res: [{"ts": "2025-11-07T18:12:07.422Z", "method": "GET", "path": "/"}, {"query": {}, "responseSnippet": "Hello! I'm your AI nutrition assistant. I help you plan meals, provide nutrition advice, and support your bulking goal. How can I help you today?"}, {"ts": "2025-11-07T18:12:07.422Z", "method": "POST", "path": "/api/logs"}]
```

Selected Meals View

Curated meal options with detailed nutritional information.

Grilled Chicken with Rice

High protein, balanced macros for muscle building

Egg & Avocado Toast

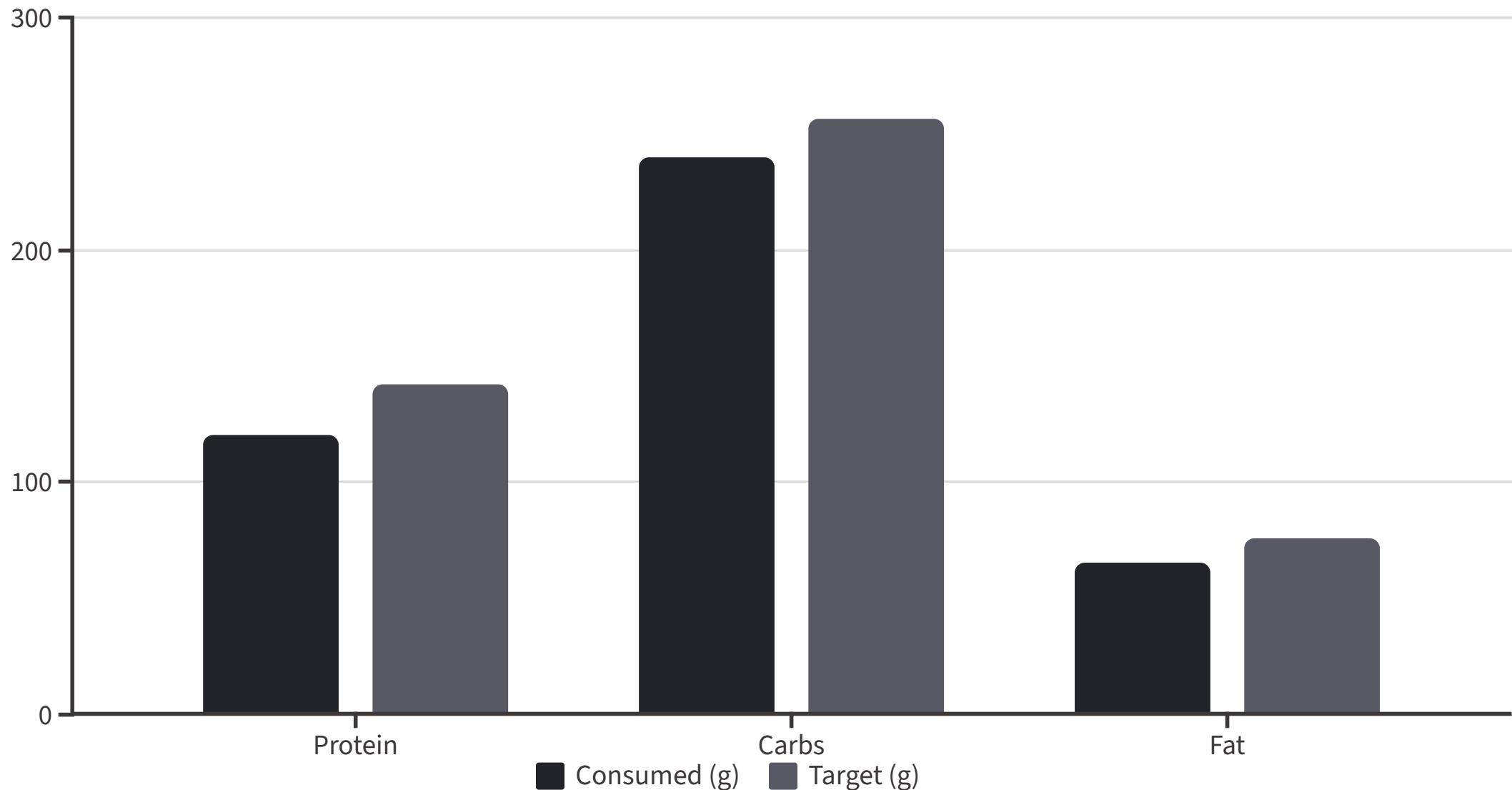
Nutrient-dense breakfast with healthy fats

Salmon & Quinoa Bowl

Omega-3 rich with complete amino acid profile

Nutrition Progress Tracking

Real-time visualization of daily nutritional intake against targets.



AI Nutrition Assistant

Chat-based assistant provides personalized nutrition guidance and food information.

User: "How many calories in salmon?"

AI: "100g grilled salmon: ~206 kcal, 22g protein, 12g fat. Perfect for your bulking goal!"



Backend Monitoring & Logs

API request/response logging for performance tracking and debugging.

Request Logs

- User profile submissions
- Meal selection queries
- AI chatbot interactions

Response Monitoring

- API response times
- Error tracking
- Data validation checks





Project Architecture

Full-stack application with React frontend and Node.js backend.

/client

React components, utilities,
Tailwind CSS

/server

Node.js API, database, AI
integration

Database

User profiles, meal data, nutrition logs

Development Roadmap

Current implementation and planned enhancements.

Completed

User input, BMI/TDEE calculation, dashboard, macro tracking, AI chatbot, meal updates, logging

Future Enhancements

Indian food datasets, PDF export, wearable integration, push reminders, user authentication

