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# IBM HACKATHON PROJECT

## FITNESS BUDDY

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# OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

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# PROBLEM STATEMENT

In today's busy world, many people struggle to maintain a healthy lifestyle due to lack of time, motivation, and personalized guidance. Traditional fitness methods are often costly, inflexible, and not tailored to individual needs, making it hard for users to stay consistent.

Proposed Solution: Fitness Buddy is an AI-powered virtual assistant that offers personalized home workout plans, motivational tips, and simple nutrition suggestions. It is designed to be accessible anytime, helping users stay healthy, build good habits, and reach their fitness goals through a friendly and conversational interface.

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# TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Mistral model

# IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Mistral foundation model

# WOW FACTORS

Hyper-Personalization Leverages AI to generate customized workout and nutrition plans based on individual preferences, fitness levels, goals, and daily routines.

Conversational and Human-Like Interaction Integrates natural language processing (NLP) to provide a friendly, engaging, and interactive chatbot experience that feels like talking to a real fitness coach.

Adaptive Smart Scheduling Dynamically adjusts workout routines and meal suggestions based on user availability, energy levels, and calendar events for maximum flexibility.

Built-in Motivation System Offers daily fitness challenges, motivational tips, and milestone tracking to encourage habit formation and long-term commitment.

Smart Meal Recommendations Suggests simple, nutritious meals tailored to user preferences, dietary restrictions, and locally available ingredients.

Real-Time Progress Tracking Monitors fitness activities and health metrics, presenting visual insights to help users understand their growth and stay motivated.

Accessible Anytime, Anywhere Designed to work on mobile and desktop platforms without the need for gym equipment, making it ideal for users at home or on the go.

Behavior-Driven Habit Building Applies psychological principles like the habit loop (cue, action, reward) to help users build and maintain consistent fitness habits.

Offline Functionality Provides essential features such as workout routines and motivational messages without requiring continuous internet connectivity.

Multilingual Interface Supports multiple languages to cater to a diverse user base, increasing accessibility and user engagement.

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## END USERS

- Students
- Working Professionals
- Home-Based Individuals
- Beginners in Fitness

## RESULTS

**An AI Powered health and fitness coach has been created.**

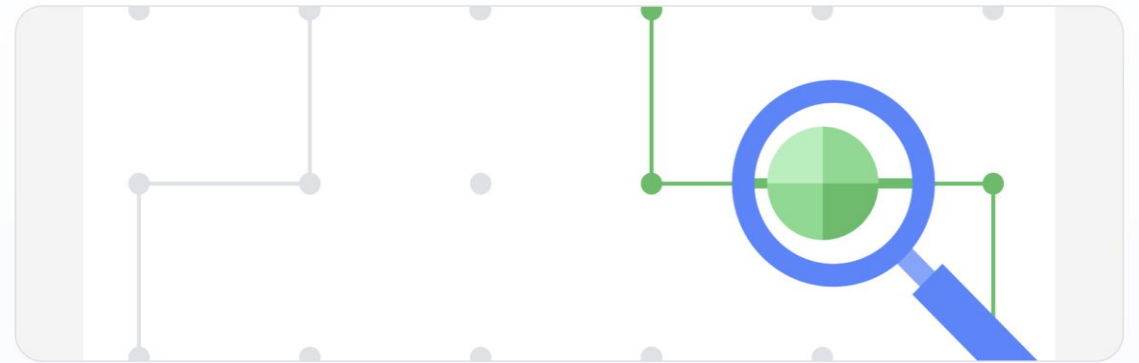
### Agent preview



Fitness Buddy 10:10 AM

Welcome to Fitness Buddy

AI coach for home workouts, meal ideas, motivation, and habits—your guide to staying fit daily.



Type something...





# RESULTS

## Agent preview



You: 10:33 AM

Hey Fitness Buddy, I'm a beginner who hasn't worked out in months. I don't have any gym equipment and I can only spare 20 minutes in the morning before work. I want to get fitter and lose some belly fat, but I often struggle with motivation and sticking to routines. Can you help me with a workout plan, something easy to cook for breakfast, and maybe a bit of motivation to get started?



Fitness Buddy 10:33 AM

Sure, I'd be happy to help you get started on your fitness journey! Here's a simple plan to get you going:

### Workout Plan

Since you only have 20 minutes in the morning, let's focus on a full-body workout that you can do at home without any equipment. Here's a routine you can follow:

#### 1. Warm-up (2 minutes)

- Jumping Jacks: 30 seconds
- High Knees: 30 seconds
- Arm Circles: 30 seconds
- Hip Rotations: 30 seconds

#### 2. Workout (16 minutes)

| type something...



# RESULTS

## Agent preview

### Breakfast Idea

For a quick and healthy breakfast, you can try making **Banana Oatmeal Pancakes**. Here's a simple recipe:

#### Ingredients:

- 1 ripe banana
- 1/2 cup of rolled oats
- 1/2 cup of non-dairy milk (almond, soy, etc.)
- A pinch of cinnamon (optional)

#### Instructions:

1. Mash the banana in a bowl.
2. Add the rolled oats and non-dairy milk to the bowl and mix well.
3. Let the mixture sit for a few minutes to allow the oats to absorb the liquid.
4. Heat a non-stick pan over medium heat.
5. Pour the batter onto the pan to form small pancakes.
6. Cook until bubbles form on the surface, then flip and cook the other side until golden brown.
7. Serve with a drizzle of honey or a sprinkle of cinnamon.

### Motivation

Type something...



# RESULTS

## Deployed AI Agent

Fitness Buddy

✓ Deployed

Online

API reference

Test


Preview

New chat +

R

You 11:56 AM

Hey Fitness Buddy, I work a desk job and barely get time to move throughout the day. I feel stiff and tired after work, and I often skip meals or end up eating fast food. I want to start making small changes without drastically changing my schedule. Can you suggest a short evening workout, a quick and healthy dinner idea, and a way to stay consistent without getting overwhelmed?



Fitness Buddy 11:56 AM

Hello! It's great that you're looking to make positive changes to your routine. Let's start with a simple 15-minute evening workout to help you loosen up and build strength.

**Warm-up (3 minutes):**

- March in place
- Gentle arm circles
- Light twists

Type something...

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## CONCLUSION

- Fitness Buddy offers a smart, accessible solution to modern health challenges by providing personalized fitness and nutrition guidance anytime, anywhere.
- Its AI-driven, conversational interface ensures user engagement, motivation, and habit formation without the need for expensive equipment or subscriptions.
- The platform empowers users of all backgrounds—from students to professionals—to lead healthier, more consistent lifestyles through simple and adaptable support.

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## GITHUB LINK

- <https://github.com/Rittwika03/Fitness-Buddy.git>

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# FUTURE SCOPE

- Integration with Wearables and Health Trackers.
- Voice Assistant Support.
- AI-Based Progress Prediction.
- Community and Social Features.
- Mental Health and Wellness Integration.
- Personalized Goal Setting and Coaching.

# IBM CERTIFICATIONS



# IBM CERTIFICATIONS





# IBM LAB CERTIFICATE

7/15/25, 12:45 PM

Completion Certificate | SkillsBuild

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Rittwika Datta

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 15 Jul 2025 (GMT)

**Learning hours:** 20 mins



**THANK YOU**