
CAPSTONE PROJECT

FITNESS BUDDY

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OUTLINE

- Problem Statement
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PROBLEM STATEMENT

In today's fast-paced world, many individuals struggle to maintain a consistent fitness routine due to a lack of reliable guidance, personalized advice, and easily accessible information. Most people turn to the internet for help, which can be overwhelming and often misleading. There is a growing need for an intelligent, interactive system that can provide accurate, real-time fitness support tailored to individual needs.

Proposed Solution:

To address the lack of accessible and personalized fitness support, we propose **Fitness Buddy**, an AI-powered virtual assistant designed to provide accurate, real-time fitness guidance. Built using IBM Watson and enhanced with web search and computational tools, the agent can answer user queries related to workouts, diet plans and fitness goals.

TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

IBM CLOUD SERVICES USED

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

WOW FACTORS

Fitness Buddy is designed to act as a smart, interactive companion for individuals seeking health and wellness guidance.

Leverages advanced NLP and search tools to give instant, reliable answers to fitness queries—just like talking to a personal trainer.

Unlike human coaches, this virtual fitness expert is always available for help, day or night.

Uses state-of-the-art language models (e.g., IBM Granite or GPT-based) to carry smooth, intelligent conversations.

From simple home workouts to advanced gym routines—caters to users at all fitness levels.

Designed with secure, ethical AI practices—ensuring user data is respected and protected.

END USERS

- Fitness Enthusiasts
- Beginners in Fitness
- Gym Members and Trainers
- Students and Young Adults
- Home Workout Users
- Corporate Wellness Programs

RESULTS

Agent preview



Fitness Buddy 08:58 PM

Welcome to Fitness Buddy

Fitness Buddy is your AI-powered personal fitness assistant, designed to help you stay healthy.



|Type something...



RESULTS

Agent preview



You: 09:24 PM

Give me 4 tips to be fit and healthy



Fitness Buddy 09:24 PM

Hi, I am your fitness buddy. Here are 4 tips to be fit and healthy:

1. **Regular Exercise:** Aim for at least 30 minutes of moderate-intensity exercise most days of the week. This can include activities like brisk walking, cycling, swimming, or dancing.
2. **Balanced Diet:** Eat a variety of nutrient-rich foods, including fruits, vegetables, whole grains, lean proteins, and healthy fats. Limit processed foods, sugary drinks, and excessive salt and sugar.
3. **Stay Hydrated:** Drink plenty of water throughout the day to stay hydrated. Water is essential for many bodily functions and can help with digestion, nutrient absorption, and even weight management.

Type something...



RESULTS

Agent preview



You: 09:27 PM

give me 2 post workout fitness meal



Fitness Buddy 09:27 PM

Hi, I am your fitness buddy. Here are 2 post-workout meal ideas:

1. **Grilled Chicken with Roasted Vegetables:** This meal provides a good balance of protein and carbohydrates. Grilled chicken is a lean protein source, while roasted vegetables like sweet potatoes and bell peppers offer complex carbs and essential nutrients.
2. **Greek Yogurt with Berries and Granola:** Greek yogurt is high in protein, which is crucial for muscle recovery. Berries are rich in antioxidants, and granola adds a crunchy texture along with some healthy fats and carbs.


Would you like more meal ideas or information on the benefits of post-workout

Type something...



RESULTS

Deployed AI Agent

Fitness Buddy  Deployed Online

API reference

Test

Preview

New chat +

A

You 10:39 PM

give me good fitness diet plan

Q

Fitness Buddy 10:39 PM

Hi, I am your fitness buddy. How can I help you related to your fitness....

Here are some resources that might help you with your fitness diet plan:

1. [Exercise and Eating Healthy](#)

Type something...



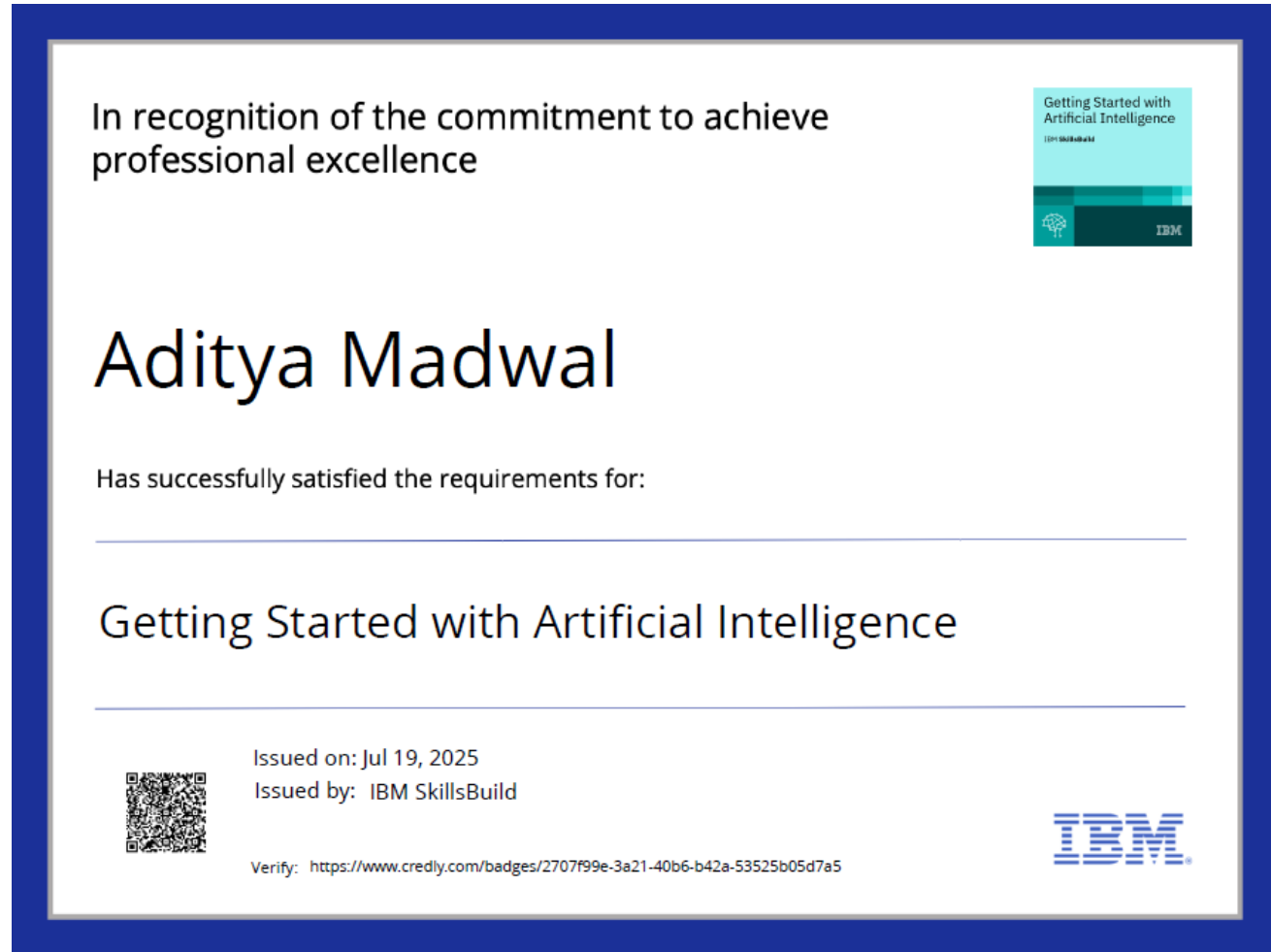
CONCLUSION

The **Fitness Buddy AI Agent** represents a significant step toward making fitness guidance more accessible, personalized, and intelligent. By combining natural language processing, real-time web retrieval, and smart health calculators, it empowers users to take charge of their wellness journey anytime, anywhere. With its ability to engage users in meaningful, human-like conversations and provide data-driven insights, Fitness Buddy has the potential to transform the way people approach fitness—bridging the gap between technology and personal health care.

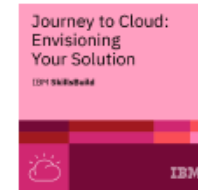
FUTURE SCOPE

- Mobile App Integration
- Video Workout Recommendations
- Health Progress Tracking
- Wearable Device Support
- AI-Driven Health Risk Prediction

IBM CERTIFICATIONS



In recognition of the commitment to achieve
professional excellence



Aditya Madwal

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



Issued on: Jul 20, 2025

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IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Aditya Madwal

for the completion of

**Lab: Retrieval Augmented Generation with
LangChain**

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 27 Jul 2025 (GMT)

Learning hours: 20 mins

GITHUB LINK

Github link: https://github.com/aditya-madwal25/Agent_AI_FitnessBuddy.git



THANK YOU