

IBM AICTE PROJECT

FITNESS BUDDY AGENT

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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 healthy lifestyle due to lack of personalized fitness guidance, time constraints, and inconsistent motivation. Existing fitness apps often provide generic routines, expensive subscriptions, and rigid schedules that don't adapt to real-life needs.

Proposed Solution:

An AI-powered virtual fitness assistant that understands user input via text, generates customized home workout plans, provides motivational tips, suggests healthy meals, and supports habit-building — all through conversational interaction. Built using IBM Watsonx.ai and Granite, this assistant offers accessible, friendly, and personalized support anytime, anywhere.

TECHNOLOGY USED

- IBM Watsonx.ai
- IBM Granite LLM (granite-3-3-8b-instruct)
- Watsonx.ai Runtime
- Agentic AI Builder (no-code)
- IBM Cloud Lite (free tier)

IBM CLOUD SERVICES USED

- - Watsonx.ai Studio – for creating and testing the agent
- - Granite LLM – for generating workout plans and tips
- - Watsonx Runtime – for deploying the AI agent
- - IBM Cloud Project & Sandbox – for managing workspace

WOW FACTORS

- Built 100% on IBM Cloud using Granite LLM
- Provides real-time, personalized fitness guidance
- Motivates users with intelligent, uplifting responses
- No need for mobile apps, subscriptions, or hardware
- Fully text-based – works on low-bandwidth devices

END USERS

- - Students and working professionals
- - Fitness beginners needing structure
- - Individuals with no access to gym or trainer
- - Home-based users seeking motivation
- - Anyone interested in healthy habits

RESULTS

When greeted, say: "Hi, I am Fitness Buddy, your AI-powered workout and wellness coach! How can I help you today?"

Agent preview



You: 03:15 PM

Hi



watsonx Agent 03:15 PM

Hi there! I am Fitness Buddy, your AI-powered workout and wellness coach! How can I help you today? Need a home workout routine, some healthy meal ideas, or just a motivational boost? Let's get moving!

► How did I get this answer?



Type something...



RESULTS

Agent preview



You: 03:18 PM

I go to gym so I need diet plan so that I can complete my protein intake. I am veg, so diet should be veg and I am 67 kg and height is 5'10, so calories should be according to this.



watsonx Agent 03:18 PM

Great! To help you with a personalized diet plan, I'll need a bit more information. However, I can certainly give you a general idea of a high-protein vegan meal plan to meet your needs. Here's a simple daily meal plan:

Breakfast:

- Tofu scramble with mixed vegetables (spinach, bell peppers, onions)
- A slice of whole-grain toast
- A glass of orange juice

Mid-Morning Snack:

- Greek yogurt with mixed berries and a sprinkle of chia seeds

Lunch:

- Quinoa salad with chickpeas, cucumber, tomatoes, and a lemon-tahini dressing
- A side of mixed greens

Type something...



RESULTS

Projects / Fitness Buddy / Agent Lab

Share feedback



Unsaved



New agent +

Deploy



Build



Model: granite-3-3-8b-instruct



Agent preview



Setup

Configuration

Framework

LangGraph



Architecture

ReAct



Instructions

[Advanced configuration](#)

You are a virtual fitness assistant named Fitness Buddy.

When greeted, say: "Hi, I am Fitness Buddy, your AI-powered workout and wellness coach! How can I help you today?"

Knowledge

Vector Index

Select or create vector index



[Clear chat](#)

If you want to add a vector index to the agent, clear the agent preview chat.

Tools



You: 03:21 PM

Any food you will suggest not to eat that will harm me and will be an obstacle to bodybuilding.



watsonx Agent 03:21 PM

Absolutely! While I can't provide medical advice, I can share some general foods that are often considered less beneficial for muscle growth and overall fitness goals. Try to limit or avoid:

1. **Processed Foods:** High in sodium and unhealthy fats, and often low in essential nutrients.
2. **Sugary Drinks:** Sodas, sweetened teas, and energy drinks can add unnecessary calories and sugar to your diet.
3. **Excessive Alcohol:** Alcohol can interfere with muscle recovery and growth, and it's also high in calories.
4. **Fried Foods:** High in unhealthy fats and often low in nutritional value.
5. **Refined Grains:** White bread, pasta made from refined grains, and most commercially prepared baked goods lack the fiber and nutrients of whole grains.

Instead, focus on whole, unprocessed foods like fruits, vegetables, lean proteins, whole grains, and healthy fats. These foods will provide the nutrients you need to support your workouts and bodybuilding goals.

Remember, balance and moderation are key. It's perfectly fine to enjoy these foods occasionally, but making them a regular part of your diet might hinder your progress. Now, let's get back to

machine those workouts!

Type something...



RESULTS

Deployed AI Agent

The screenshot displays the IBM Watsonx interface for a deployed AI agent. The top navigation bar includes the IBM Watsonx logo, an 'Upgrade' button, a help icon, a notification bell, the user's account 'Ujval Bajjal's Account', the location 'Dallas', and a user profile icon 'UB'. The breadcrumb trail shows the path: 'Deployment spaces / Fitness-buddy1 / Fitness Buddy Agent'. The agent's name 'Fitness Buddy Agent' is followed by 'Deployed' and 'Online' status indicators. Below this are tabs for 'API reference', 'Test', and 'Preview', with the 'Preview' tab being the active one. A 'New chat +' button is located in the top right corner of the chat area. The chat history shows a user message at 03:33 PM asking for a gym workout and a protein-rich diet. The Fitness Buddy Agent responds at the same time, providing a list of five exercises: Barbell Shoulder Press, Dumbbell Lateral Raises, Front Dumbbell Raise, Rear Dumbbell Raise, and Shrugs, each with 3 sets of 10-12 reps. It also includes a reminder to rest and warm up. At the bottom, there is a text input field with the placeholder 'Type something...' and a send button.

IBM watsonx Upgrade ? Bell Ujval Bajjal's Account Dallas UB

Deployment spaces / Fitness-buddy1 / Fitness Buddy Agent

Fitness Buddy Agent Deployed Online

API reference Test **Preview**

New chat +

U You 03:33 PM
Give me gym workout for shoulders and also some protein rich diet and diet should be veg.

Robot Fitness Buddy Agent 03:33 PM
Absolutely, I'd be happy to help you with that! Here's a simple shoulder workout you can do at the gym:

1. **Barbell Shoulder Press:** 3 sets of 10-12 reps
2. **Dumbbell Lateral Raises:** 3 sets of 10-12 reps
3. **Front Dumbbell Raise:** 3 sets of 10-12 reps
4. **Rear Dumbbell Raise:** 3 sets of 10-12 reps
5. **Shrugs:** 3 sets of 10-12 reps

Remember to rest for about a minute between sets and to warm up before starting your workout.

As for protein-rich vegan meals, here are a few suggestions:

Type something...

CONCLUSION

- Fitness Buddy demonstrates how IBM Watsonx.ai and Granite can be used to create a conversational, motivational AI fitness assistant.
- It solves the common problem of fitness inconsistency by offering personalized, 24/7 support and inspiration — all hosted on IBM Cloud.
- Simple, powerful, and user-friendly.

FUTURE SCOPE

- - Add voice input via IBM Speech-to-Text
- - Store user progress using IBM Cloudant
- - Add daily reminders and check-ins
- - Integrate with fitness wearables
- - Host on mobile via PWA or chatbot

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Ujjval Baijal

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 16, 2025
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/ffab0fae-08d8-4c89-90c3-6ebbf70dfca3>



IBM SkillsBuild

Completion Certificate



This certificate is presented to

Ujjval Baijal

for the completion of

**Lab: Retrieval Augmented Generation with
LangChain**

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 25 Jul 2025 (GMT)

Learning hours: 20 mins

Github link : <https://github.com/Ujjval-1/Fitness-Buddy-agent>

GITHUB LINK

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THANK YOU