
IBM HACKATHON PROJECT

FitnessBuddy AI AGENT

Presented By: Sneha Paliwal

College Name & Department : MIT Academy of Engineering

Computer Science Department

OUTLINE

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

PROBLEM STATEMENT

In today's fast-paced world, many individuals struggle to maintain a healthy lifestyle due to:

- Lack of personalized fitness and nutrition guidance
- Rigid schedules and time constraints
- High costs of gym memberships and coaching
- Inconsistent motivation and poor habit-building

Traditional solutions fail to adapt to personal routines, goals, and accessibility needs. There is a growing demand for a 24/7, intelligent, and user-friendly fitness companion that delivers real-time support.

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

- ♦ **24/7 Personalized Fitness Assistant**

Available anytime, anywhere—adapts to the user's schedule and lifestyle without the need for expensive equipment or subscriptions.

- ♦ **AI-Generated Workouts & Meals**

Uses IBM Granite to dynamically recommend workouts and healthy meals based on user input like duration, fitness level, or goals.

- ♦ **No Equipment? No Problem!**

Tailors routines that can be done at home with zero or minimal equipment.

- ♦ **Motivational & Habit-Building Coach**

Sends reminders, motivational quotes, and tracks habits—making it more than just a workout planner.

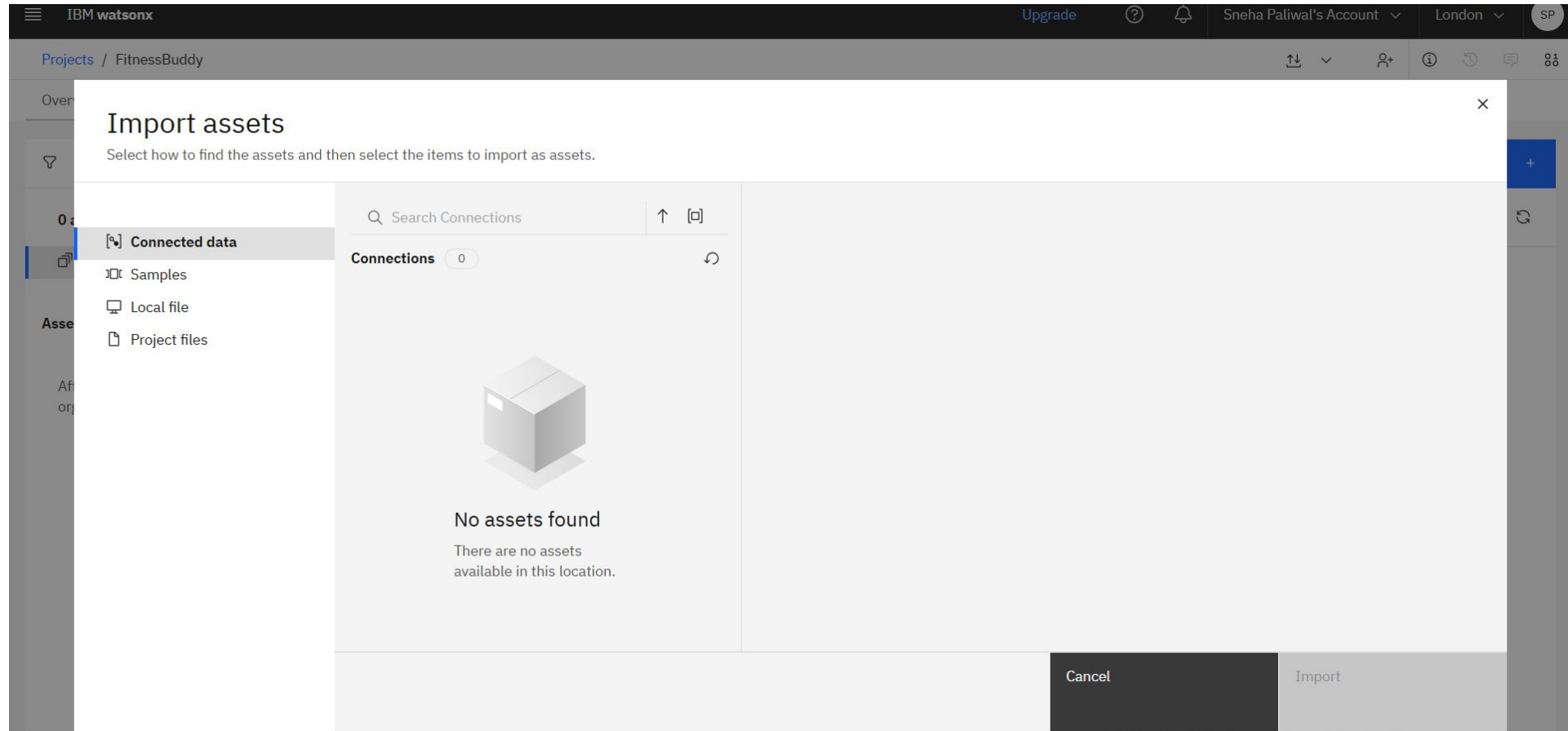
- ♦ **Powered by IBM Cloud**

Fully built using IBM Watsonx, Granite, and Cloud Lite—scalable, smart, and secure.

END USERS

- Academic Researchers
- Research Institutions and Universities
- Industry R&D Teams
- Educators

RESULTS



RESULTS

IBM watsonx

Upgrade ?

Sneha Paliwal's Account

London

SP

Projects / FitnessBuddy / Agent Lab

Share feedback β Unsaved 📄 New agent + Deploy 🚀

Build

AI Model: llama-3-2-11b-vision-instruct

Icon

Placeholder image

Quick start questions

Add up to 4 quick start questions that your users can select. +

Configuration

Framework: LangGraph

Architecture: ReAct

Instructions

You are a helpful assistant that uses tools to answer questions in detail.
When greeted, say "Hi, I am watsonx.ai agent. How can I help you?"

Advanced configuration

Agent preview

FitnessBuddy 07:29 PM

Welcome to FitnessBuddy

Change this description to reflect your particular agent

Type something... 🗨 ➤

RESULTS

[Deployment spaces](#) / [FitnessBuddySpace](#) / [FitnessBuddy](#) /



FitnessBuddy ✓ Deployed Online

API reference

Test

Preview

Enter input data

Text

JSON

Text input and .csv files are not supported for this deployment because it does not have an input schema defined.

Manually enter or upload a file containing input data in JSON format. Max file size is 50 MB.

[Browse local files](#) ↗

[Search in space](#) ↗

```
{
  "messages": [
    {
      "content": "",
      "role": ""
    }
  ]
}
```

RESULTS

The screenshot displays the IBM Watsonx interface. At the top, there's a navigation bar with 'IBM watsonx', an 'Upgrade' button, and a file upload notification for 'FitnessBuddy_test_result.json' (1,259 B • Done). Below this is a breadcrumb trail: 'Deployment spaces / FitnessBuddySpace / FitnessBuddy /'. The main content area is titled 'Prediction results' and includes a toggle for 'Display format for prediction results' (Table view / JSON view) and a 'Show input data' toggle. The JSON view is selected, showing a response with a single choice. The message content is: 'Based on the information provided by the RAGQuery tool, the best workout routine for weight loss is a combination of cardio and strength training exercises that can be done at home with minimal equipment. The tool recommends a full body burn workout that lasts for 20 minutes and has a medium level of difficulty. It also suggests a chest and triceps workout that lasts for 30 minutes and has a hard level of difficulty. Additionally, the tool recommends a yoga flow workout that lasts for 25 minutes and has an easy level of difficulty. It's also important to note that the tool provides personalized meal suggestions and motivational tips to help users stay consistent and motivated. The tool also encourages habit-building and consistency tracking to help users achieve their fitness goals. Overall, the best workout routine for weight loss is one that is tailored to an individual's needs and goals, and that includes a combination of cardio and strength training exercises. The tool provides a comprehensive approach to fitness that includes workout recommendations, meal suggestions, and motivational tips to help users achieve their goals.' A 'Download JSON file' button is located at the bottom right.

IBM watsonx Upgrade FitnessBuddy_test_result.json 1,259 B • Done London SP

Deployment spaces / FitnessBuddySpace / FitnessBuddy /

Prediction results

Display format for prediction results

☐ Table view ☒ JSON view ☐ Show input data ⓘ

JSON view

```
{
  "choices": [
    {
      "index": 0,
      "message": {
        "content": "Based on the information provided by the RAGQuery tool, the best workout routine for weight loss is a combination of cardio and strength training exercises that can be done at home with minimal equipment. The tool recommends a full body burn workout that lasts for 20 minutes and has a medium level of difficulty. It also suggests a chest and triceps workout that lasts for 30 minutes and has a hard level of difficulty. Additionally, the tool recommends a yoga flow workout that lasts for 25 minutes and has an easy level of difficulty.\n\nIt's also important to note that the tool provides personalized meal suggestions and motivational tips to help users stay consistent and motivated. The tool also encourages habit-building and consistency tracking to help users achieve their fitness goals.\n\nOverall, the best workout routine for weight loss is one that is tailored to an individual's needs and goals, and that includes a combination of cardio and strength training exercises. The tool provides a comprehensive approach to fitness that includes workout recommendations, meal suggestions, and motivational tips to help users achieve their goals.",
        "role": "assistant"
      }
    }
  ]
}
```

Download JSON file

CONCLUSION

FitnessBuddy is an intelligent, AI-powered virtual assistant that helps users stay fit, eat better, and stay motivated—anytime, anywhere.

Built using IBM Watsonx and Granite Foundation Models, it offers personalized guidance without the cost or rigidity of traditional fitness solutions.

💡 It empowers users by:

- Recommending smart workouts and meal plans
- Encouraging habit-building and wellness consistency
- Making health accessible to beginners and busy individuals alike



GITHUB LINK

- <https://github.com/snehapaliwal/FitnessBuddy.git>

FUTURE SCOPE

■ **Voice Assistant Integration**

Enable hands-free interaction via voice commands (e.g., “Start my 10-minute workout”).

■ ♦ **Wearable Device Support**

Integrate with smartwatches and fitness bands for live tracking of steps, heart rate, calories, etc.

■ ♦ **Progress Analytics Dashboard**

Provide visual reports of weekly goals, habits, nutrition, and workout consistency.

■ ♦ **Mental Wellness & Meditation Support**

Add AI-generated meditation routines, breathing exercises, and mood tracking.

■ ♦ **Community & Challenges**

Enable users to participate in fitness challenges and share progress with friends or groups.

■ ♦ **Multilingual & Regional Customization**

Support content in multiple Indian languages and meal plans tailored to regional diets.

IBM CERTIFICATIONS



8/4/25, 10:21 PM

Completion Certificate | SkillsBuild

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

SNEHA PALIWAL

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 21 Jul 2025 (GMT)

Learning hours: 20 mins

https://skills.yourlearning.ibm.com/certificate/ALM-COURSE_3824998

1/1

8/4/25, 10:23 PM

Completion Certificate | SkillsBuild

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

SNEHA PALIWAL

for the completion of

Journey to Cloud: Envisioning Your Solution

(PLAN-32CB1E21D8B4)

According to the Your Learning Builder - Plans system of record

Completion date: 21 Jul 2025 (GMT)

<https://skills.yourlearning.ibm.com/certificate/PLAN-32CB1E21D8B4>

1/1



THANK YOU