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# CAPSTONE PROJECT

## FITNESS BUDDY

**Presented By:**

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**College Name & Department : TOC H INSTITUTE OF SCIENCE  
AND TECHNOLOGY- COMPUTER SCIENCE**

# OUTLINE

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

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# PROBLEM STATEMENT

Health-conscious individuals and fitness enthusiasts often face challenges in maintaining consistent routines due to lack of personalized guidance, time limitations, and information overload. Sifting through countless workout plans, nutrition tips, and motivation strategies across various sources is inefficient and overwhelming. The absence of a centralized, intelligent solution makes it difficult to stay on track with long-term fitness goals.

## Proposed Solution:

An AI Fitness Agent that leverages Natural Language Processing (NLP) and user-centric design to deliver personalized workout plans, healthy recipes, motivational support, and habit-tracking tools—all through an accessible, conversational interface.

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# 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

- This agent will empower users to achieve their health goals faster, eliminate the need for expensive coaching or rigid plans, and boost long-term consistency through personalized, real-time support. Whether you're just starting or optimizing your routine, the AI acts as a 24/7 fitness companion tailored to your lifestyle.

## Unique features:

- Dynamic workout generation based on fitness level and time availability
- Smart meal suggestions aligned with dietary preferences and goals
- Daily motivational nudges and habit-building support
- Progress tracking and personalized fitness insights
- Adaptive plans that evolve with user feedback
- Voice/chat-based interaction for on-the-go support

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## END USERS

- Busy Professionals
- Fitness Beginners
- College Students
- Home-Based Individuals

# RESULTS

IBM watsonx

Upgrade ⓘ 🔔


Stewart Lalú's Account ▾ Dallas ▾ SL

Deployment spaces / Fitnessbuddy / Fitness Buddy /


Fitness Buddy ✔ Deployed Online

API reference Test **Preview**

New chat +

 Fitness Buddy 11:26 PM

Welcome to Fitness Buddy  
Your AI coach for personalized home workouts, simple meal ideas, and daily motivation.



Quick start samples

Suggest a quick home workout for me. →

What's a simple and healthy meal idea? →


I need some motivation to work out today. →



How do I start building a fitness routine? →







Type something... ➤



# RESULTS

 IBM watsonx


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Deployment spaces / Fitnessbuddy / Fitness Buddy /      


## Fitness Buddy ✔ Deployed Online

API reference Test **Preview**

New chat +

 You 11:13 PM

Suggest a quick home workout for me.

 Fitness Buddy 11:13 PM


Great! To provide the best workout for you, could you please tell me a bit about your current fitness level and any equipment you have available?


While waiting, here's a simple 15-minute full-body workout you can do at home with no equipment needed:

1. Jumping Jacks (2 minutes): Start with a warm-up to get your heart rate up.
2. Push-ups (2 minutes): Modify on your knees if standard push-ups are too challenging.
3. Squats (2 minutes): Keep your knees behind your toes and your chest up.
4. Plank (2 minutes): Hold a plank position for as long as you can, aiming for the full duration.
5. Lunges (2 minutes): Alternate legs with each lunge.
6. Mountain Climbers (2 minutes): Bring your knees towards your chest in a running motion while in a plank position.
7. Cool Down (1 minute): Stretch out your major muscle groups.

Remember, it's important to listen to your body and adjust the intensity or duration as needed. If you have any specific fitness goals or limitations, please let me know so I can tailor the workout more effectively.

► How did I get this answer?





edunet  
foundation

# RESULTS

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Share feedback β Unsaved 📁 New agent + Deploy 🔗

Build

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

Setup



Name

Fitness Buddy

Description 86/100

Your AI coach for personalized home workouts, simple meal ideas, and daily motivation.

Icon



Quick start questions

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

Suggest a quick home workout for me.

What's a simple and healthy meal idea?

I need some motivation to work out today.

Agent preview

SL You: 09:50 PM

I'm a beginner. Can you suggest a 15-minute full-body workout I can do at home?

Fitness Buddy 09:50 PM

Absolutely! Here's a simple 15-minute full-body workout you can do at home with no equipment needed. Remember to warm up before starting and cool down afterwards.

**Warm-up (3 minutes)**

- March in place or lightly jog if possible.
- Do some dynamic stretches like arm circles, leg swings, and torso twists.

**Workout (10 minutes)**

- Squats (1 minute)**
  - Stand with your feet hip-width apart. Lower your body as far as you can by pushing your hips back and bending your knees. Pause, then slowly push yourself back to the starting position.
- Push-ups (1 minute)**
  - Start in a high plank position. Lower your body until your chest nearly touches the floor. Pause, then push yourself back up. If standard push-ups are too challenging, you can do them on your knees.
- Lunges (1 minute)**
  - Stand straight. Step forward with your right leg and lower your body until your right knee is at a 90-degree angle. Push back up to starting position and switch legs.
- Plank (1 minute)**
  - Start in a forearm plank position. Ensure your body forms a straight line from your shoulders to your ankles.

# RESULTS

IBM watsonx

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Share feedback β Unsaved 📁 New agent + Deploy 🚀

Build

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

Setup




Name

Fitness Buddy



Description 86/100

Your AI coach for personalized home workouts, simple meal ideas, and daily motivation.

Icon





Placeholder image




Quick start questions

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

Suggest a quick home workout for me. 

What's a simple and healthy meal idea? 

I need some motivation to work out today. 

Agent preview


SL You: 09:53 PM



what is python?

Fitness Buddy 09:53 PM

As a Fitness Buddy, my expertise is in health and fitness, not programming. However, I can tell you that Python is a high-level, interpreted programming language known for its readability and simplicity. It's widely used for web development, data analysis, artificial intelligence, and more. For detailed information, you might want to consult a tech-focused resource.

► How did I get this answer?



Type something...  

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## CONCLUSION

- The agent delivers personalized fitness and nutrition guidance tailored to individual goals.
- It saves time by automating workout planning, meal suggestions, and daily motivation.
- Fitness Agents boost consistency, engagement, and long-term health outcomes for users across all lifestyles.

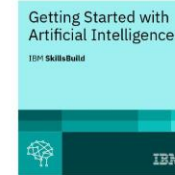
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# FUTURE SCOPE

- Multilingual Fitness Coaching
- Voice-Activated Workout and Meal Planning
- Integration with Wearable Devices (e.g., Fitbit, Apple Watch)
- AI-Driven Habit and Progress Analytics
- Smart Integration with Calendar and Reminder Apps
- Personalized Wellness Challenges and Goal Setting

# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



## Stewart Lalu

Has successfully satisfied the requirements for:

### Getting Started with Artificial Intelligence



Issued on: Jul 20, 2025  
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Has successfully satisfied the requirements for:

### Journey to Cloud: Envisioning Your Solution



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# IBM CERTIFICATIONS

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Stewart Lalu

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



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## GITHUB LINK

[https://github.com/stewartlalu/Fitness\\_Buddy](https://github.com/stewartlalu/Fitness_Buddy)



**THANK YOU**