
CAPSTONE PROJECT

FITNESS BUDDY

Student name : RAHUL KAPOOR

College Name & Department : DIT UNIVERSITY B.TECH (I.T.)

OUTLINE

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

PROBLEM STATEMENT

- Despite growing awareness about health and fitness, many individuals struggle to maintain consistent and effective fitness routines. Common challenges include:
- Lack of personalized guidance: Most generic workout plans fail to accommodate individual needs, goals, and physical limitations.
- Low motivation and accountability: Many people find it difficult to stay motivated, track their progress, or adhere to a regular fitness schedule.
- Overwhelming information: The abundance of conflicting advice online can confuse beginners and even experienced fitness enthusiasts, leading to poor exercise habits or misinformation.

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

- Intelligent Progress Tracking: Uses AI to analyze workout performance and adjust future routines, making each session more effective and reducing the risk of plateaus or injuries.
- Seamless Integration: Connects effortlessly with wearable devices and health apps, aggregating data for holistic wellness recommendations and more accurate feedback.
- Interactive and Engaging: Delivers gamified challenges, personalized achievements, and virtual rewards to make fitness fun and keep motivation high.
- Truly Personalized Workouts: Fitness Buddy customizes workout plans in real-time, adapting to the user's goals, fitness level, equipment access, and daily progress.

END USERS

- Fitness beginners
- Intermediate fitness enthusiasts
- Advanced fitness enthusiasts
- Busy professionals
- Gym members
- Nutrition-conscious users
- Health-conscious individuals seeking virtual coaching

RESULTS

IBM watsonx

Upgrade ?

rahul kapoor's Account

Dallas

RK

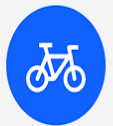
Projects / Fitness-Buddy / Agent Lab

Share feedback β Unsaved 📁 New agent + Deploy 🔗


Build

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

Icon



Placeholder image



Quick start questions

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

What is a good beginner workout routine? 🗑️

What are some easy home workouts? 🗑️

What is the best diet for weight loss? 🗑️


What warm-up routine should I follow before a game? 🗑️

Agent preview

Fitness Buddy 07:50 PM

Welcome to Fitness Buddy

Plan your workout, diet, day-to-day activities and healthy lifestyle



Sample questions

What is a good beginner workout routine? →

What are some easy home workouts? →

🗑️ ➤

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Build

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

LangGraph ReAct

Instructions [Advanced configuration](#)

Personalize Every Interaction:
Gather relevant user input (goals, preferences, fitness level, available equipment, time constraints) and customize responses accordingly.

Recommend Tailored Home Workouts:

Knowledge

Tools

Add a tool Create custom tool

Added tools (4)

Google search
Retrieve information from the internet with the Google search engine.

DuckDuckGo search

Agent preview

RK You: 07:52 PM

suggest home workout for elderly person having joints pain

🚴 Fitness Buddy 07:52 PM

I understand that you're looking for a gentle home workout suitable for an elderly person dealing with joint pain. Here's a simple routine that focuses on low-impact exercises to maintain strength and flexibility without aggravating joint discomfort:

1. **Seated Leg Raises:** Sit on a chair, keep your back straight, and slowly extend one leg out in front of you. Hold for a few seconds, then lower it back down without touching the floor. Repeat 10-15 times for each leg.

2. **Wall Push-Ups:** Stand at arm's length from a wall, place your hands on the wall at shoulder height, and perform push-ups. This helps strengthen the upper body without putting pressure on the joints. Aim for 10-15 repetitions.

3. **Seated Marching:** While sitting, alternate lifting your knees as if marching in place. This gentle movement can help improve circulation and leg strength. Try doing this for 1-2 minutes.

4. **Arm Circles:** Extend your arms out to the sides and make small circles forward for 30 seconds, then reverse the direction and make circles backward for another 30 seconds.

Type something... 🔍 ➤

edunet
foundation

RESULTS

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Agent preview

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4. **Arm Circles:** Extend your arms out to the sides and make small circles forward for 30 seconds, then reverse the direction and make circles backward for another 30 seconds.
5. **Ankle Pumps:** While sitting, extend one leg and move your ankle up and down. This helps maintain ankle mobility and circulation. Repeat with the other leg.
6. **Deep Breathing or Meditation:** Spend a few minutes in a comfortable seated position, focusing on deep, slow breaths or guided meditation to reduce stress and improve mental well-being.

Remember, it's essential to maintain proper form and listen to your body. If any exercise causes discomfort, feel free to modify or skip it. Always consult with a healthcare provider before starting any new exercise program, especially if you have existing health concerns.

Stay hydrated, and don't push yourself too hard. Consistency is key, so aim for these exercises 3-5 times a week. Celebrate your progress, no matter how small, and know that every step you take towards a healthier lifestyle is a victory!

Type something... 🔍 ➤

RESULTS

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Build

AI Model: granite-3-3-8b-instruct ⌵ ⚙️ <

LangGraph ⌵

ReAct ⌵

Instructions Advanced configuration

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Knowledge ⌵

Tools ⌵

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Create custom tool

Added tools (4)

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Agent preview

RK You: 07:52 PM
what exercise or sports activities i should do to burn maximum calories

🚴 Fitness Buddy 07:52 PM
Great question! If your goal is to burn the maximum number of calories, high-intensity workouts and sports activities are typically the most effective. Here are a few options to consider:

- Running or Jogging:** This is one of the most efficient calorie-burning exercises. A 150-pound person can burn approximately 100 calories per mile when running or 60 calories per mile when jogging.
- Swimming:** Swimming laps is an excellent full-body workout that can burn a significant number of calories. Depending on your swimming intensity, you could burn around 400-500 calories per hour.
- Cycling:** Whether you're into road cycling or stationary bikes, this activity can burn a lot of calories. A 150-pound person cycling at a moderate pace (12-14 mph) can burn about 298 calories in 30 minutes.
- High-Intensity Interval Training (HIIT):** HIIT workouts involve short bursts of intense exercise followed by brief recovery periods. These workouts can burn a high number of

🗑️ ➤

RESULTS

Deployed AI Agent

IBM watsonx

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RK

Deployment spaces / Fitness_Buddy / Fitness Buddy /

Fitness Buddy

Deployed Online


API reference Test Preview

New chat +

Fitness Buddy 08:58 PM

Welcome to Fitness Buddy

Plan your workout, diet, day-to-day activities and healthy lifestyle



About this deployment

Name

Fitness Buddy

Description

Plan your workout, diet, day-to-day activities and healthy lifestyle

Deployment Details

Deployment ID: 952b5623-a84b-4d...

Serving name: No serving name.

Software specification: runtime-24.1-py3.11

Hardware specification: Extra extra small: 1 CPU and 2 GB RAM

Copies: 1

Tags

wx-agent

Associated asset

Fitness Buddy

CONCLUSION

- Fitness Buddy is an innovative AI agent designed to empower individuals at all fitness levels by providing personalized, accessible, and science-backed fitness guidance. By addressing common challenges such as motivation, customization, and expert support, it helps users achieve their health and fitness goals effectively and sustainably.

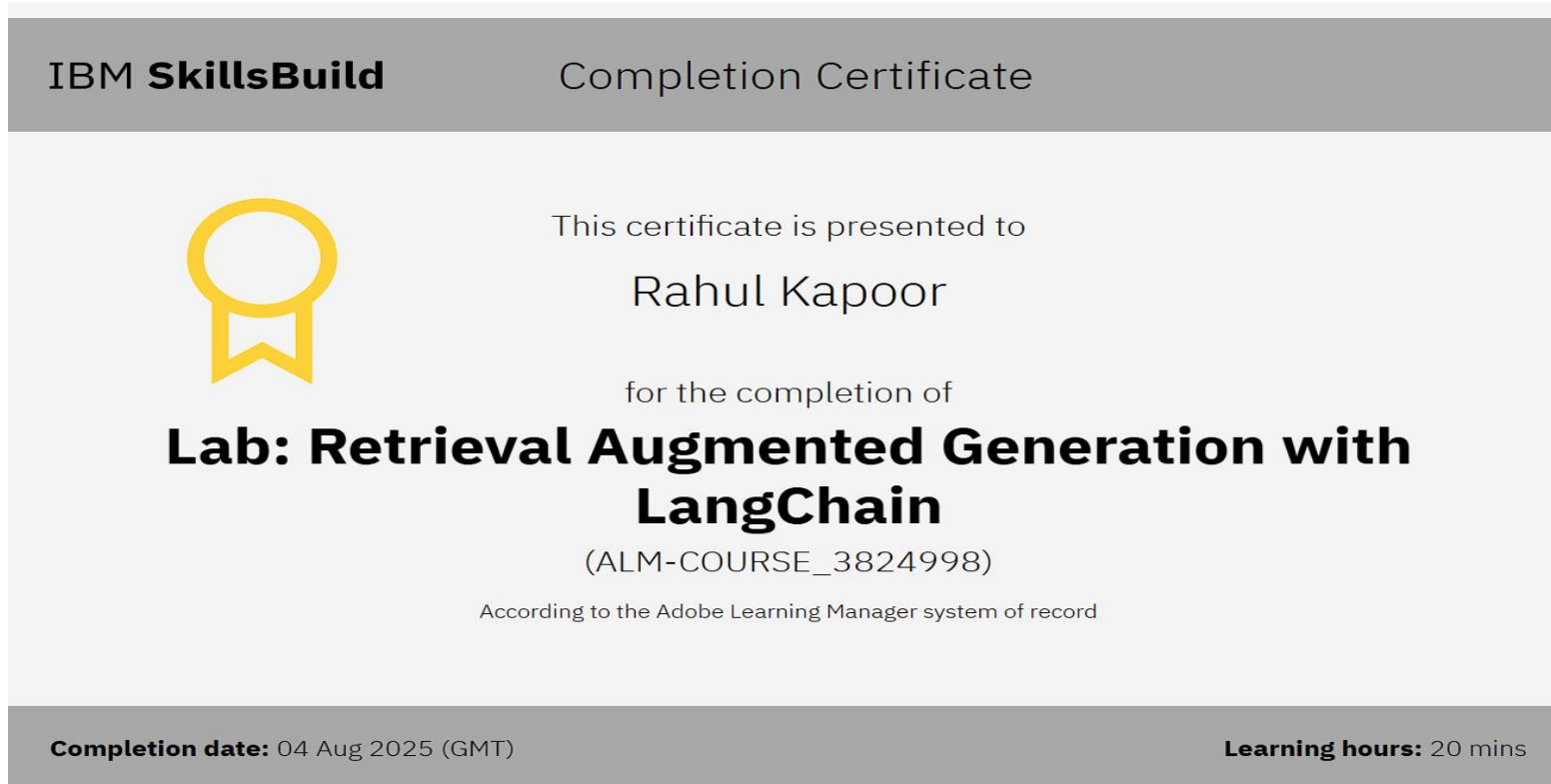
FUTURE SCOPE

- Integration with advanced biometric sensors for real-time health monitoring
- Expansion to include mental wellness coaching and holistic lifestyle management
- Development of social and community features for peer support and group motivation
- Incorporation of augmented reality (AR) and virtual reality (VR) for immersive workouts
- Collaboration with healthcare providers for personalized rehabilitation and preventive care
- Continuous improvement through user data and feedback for better personalization
- Multilingual support and cultural customization to serve a global audience

IBM CERTIFICATIONS



RAG LAB certificate here



GITHUB LINK

- https://github.com/rahulkapoor077/Fitness_Buddy



THANK YOU