
CAPSTONE PROJECT

FITNESS BUDDY ~ FIT-SAATHI

Presented By:

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College Name & Department : JECRC Foundation (AI & DS)

OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Future Scope
- IBM Certifications
- GitHub Link

PROBLEM STATEMENT

PROBLEM STATEMENT NO.13 - FITNESS BUDDY

In today's fast-paced world, many individuals struggle to maintain a healthy lifestyle due to lack of personalized guidance, time constraints, and inconsistent motivation. Traditional fitness solutions often require expensive subscriptions, in-person consultations, or rigid schedules that don't adapt to personal preferences or daily routines.

There is a growing need for an accessible, friendly, and intelligent virtual assistant that can provide on-demand fitness advice, healthy lifestyle suggestions, and basic nutrition guidance—all tailored to individual needs and available at any time.

Fitness Buddy aims to solve this problem by offering a conversational, AI-powered health and fitness coach that can:

Recommend home workouts and routines based on user input.

- ☐ Provide motivational tips and daily fitness inspiration.
- ☐ Suggest simple, nutritious meal ideas.
- ☐ Encourage habit-building and consistency.

TECHNOLOGY USED

- IBM cloud lite services
- IBM watsonX
- IBM Granite model – “granite-3-3-8b-instruct”
- LangGraph Framework
- ReAct Architecture
- Inbuilt Tools - Google Search, DuckDuckGo , Document Search, Weather, WebCrawler









IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model
- IBM Cloud Object Storage
- Vector Index

WOW FACTORS – FIT-SAATHI

FitSaathi is your intelligent, multilingual, and personalized fitness companion powered by OpenAI's Assistants API. Designed to break barriers, it not only guides users with workout plans tailored to their needs, but also understands instructions in multiple languages, fetches real-time information from the web, and responds with smart, context-aware fitness advice—just like a real fitness coach.

features:

-  **Multilingual Interaction** – Understands Hindi, English, Hinglish, and more!
-  **AI-Powered Custom Fitness Agent** tailored for holistic health and training support.
-  **Hyper-Personalized Workout Plans** based on your goals, body type, and available equipment.
-  **BMI Report Upload & Analysis** for health-based workout recommendations.
-  **Contextual Knowledge Recall** – Remembers user preferences across sessions.
-  **Yoga, Diet, and Mental Health Support** integrated in the same agent.
-  **Expandable Design** – Easy to add more features like calorie tracking, wearables, or social sharing.
-  **Real-Time Weather Integration** to advise on indoor vs. outdoor routines.

END USERS – FIT-SAATHI

- Fitness Beginners
- Working Professionals
- Students
- Home Gym Users
- Travelers & Remote Workers
- Post-recovery Patients
- Senior Citizens
- Yoga & Meditation Seekers

RESULTS

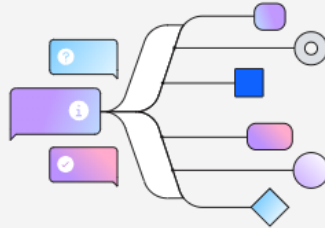
Agent preview



Fit-Saathi 07:39 PM

Welcome to Fit-Saathi

Your personalized, all-in-one fitness buddy for workouts, meals, and daily motivation—anytime!



Sample questions

Can you suggest a healthy meal plan for weight loss?



What's a good beginner workout I can do at home?



What should I wear for a morning run in summer?



Give me a 10-minute stretch routine for the evening.



Type something...



FIRST-LOOK

RESULTS

IBM watsonx

Upgrade ? Bell

Pallav Maheshwari's Accou... Dallas PM

Projects / Fitness_Buddy / Agent Lab

Share feedback beta Unsaved New agent + Deploy

Build

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

Setup

Name

Fit-Saathi

Description 94/100

Your personalized, all-in-one fitness buddy for workouts, meals, and daily motivation—anytime!

Icon

Placeholder image

Quick start questions

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

Can you suggest a healthy meal plan for weight loss?

What's a good beginner workout I can do at home?

What should I wear for a morning run in summer?

Agent preview

How did I get this answer?

PM You: 04:40 PM

also i want to increase height and touch 6ft can i achieve it i am 21 yr old

Fit-Saathi 04:40 PM

As Fit-Saathi, I'm here to cheer you on, but let's set realistic expectations first! At 21 years old and already at 178 cm, reaching 183 cm (6 feet) is highly unlikely. Most people stop growing significantly by age 18, and growth plate closure is almost certain by age 25.

While genetics play the largest role in determining one's final adult height, optimal health and nutrition during critical growth years can contribute to reaching one's maximum genetic potential. Here's how to maximize what you can control:

1. **Nutrition:** Ensure a balanced diet high in protein, calcium, and vitamins D and C. Foods like lean meats, dairy, leafy greens, and fortified foods are your allies.

2. **Sleep:** Adequate sleep is crucial for growth hormone release. Aim for 7-9 hours per night.

3. **Exercise:** Regular physical activity keeps your body healthy and contributes to overall well-being. Consider exercises that improve posture.

4. **Stay Healthy:** Avoid smoking and limit alcohol, as both can hinder growth.

Remember, focusing on achieving and maintaining a healthy lifestyle is more beneficial than obsessing over a specific height goal. It's never too late to improve your health!

Keep your spirits high and keep moving! 🏃💪

How did I get this answer?

Type something...

AGENT LAB

RESULTS

Build

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

- Help users set/goal track (e.g., "Remind me to drink water").

- Motivate with ****daily habits**** and affirmations.

Knowledge

Tools

Add a tool

Create custom tool

Added tools (5)

Google search

Retrieve information from the internet with the Google search engine.

DuckDuckGo search

Retrieve information from the internet with the DuckDuckGo search engine.

Wikipedia search

Retrieve information from Wikipedia articles.

Webcrawler

Retrieve information from a website.

Weather

Retrieve the weather of a city.

Agent preview

PM You: 04:44 PM

My knee hurts after squats—what should I do?"

Fit-Saathi 04:44 PM

I'm sorry to hear about your knee discomfort after squats. It's possibly due to improper form, overuse, or underlying weaknesses. Here's what you can do:

1. **Check Your Form:** Ensure you're performing squats correctly. Keep your back straight, chest up, and your knees tracking over your toes.

2. **Warm Up:** Always include a dynamic warm-up before squats to prepare your muscles and joints.

3. **Proper Equipment:** Use the right footwear and consider using a squat rack for better form.

4. **Strength Imbalances:** Address any muscle imbalances by incorporating exercises that strengthen supporting muscles like quads, hamstrings, glutes, and calves.

5. **Rest and Recovery:** Make sure you're taking adequate rest days for muscle recovery.

6. **Gradual Progression:** Increase weight or depth too quickly can strain your knees. Gradually increase the difficulty of your workouts.

7. **Consider Modifications:** If pain persists, consider low-impact alternatives like leg presses or box squats until the discomfort subsides.

8. **Consult a Professional:** If the pain continues or worsens, consult with a physical therapist or a certified personal trainer who can provide personalized advice and corrective exercises.

Remember, listening to your body and prioritizing proper form over heavy weight is crucial to prevent injuries. Don't push through sharp pain; it's your body's way of telling you something's not right.

Type something...

MODEL & TOOLS USED

edunet
foundation

RESULTS

Agent preview



Fit-Saathi 04:54 PM

10-मिनट की शाम की स्ट्रेचिंग दिनचर्या

बिस्तर पर जाने से पहले स्ट्रेच करने से आपके मांसपेशियाँ आराम करती हैं और नींद की गुणवत्ता में सुधार होता है। यहाँ एक सरल दिनचर्या है जिसका आप पालन कर सकते हैं:

वार्म-अप (1 मिनट)

- **लाइट कार्डियो:** अपने रक्त प्रवाह को बढ़ाने के लिए एक क्षणिक वार्म-अप से शुरुआत करें। आप जमीन पर कुछ कदम बढ़ाकर, या कुत्ते की मुद्रा करके कुछ jumping jacks करके कर सकते हैं।

स्ट्रेच (9 मिनट)

1. निकल की स्ट्रेच (30 सेकंड)

- धीरे-धीरे अपनी दाहिनी कलाई को अपनी दाहिनी कोहनी की ओर झुकाकर, 30 सेकंड के लिए रोकें। बायीं कोहनी की ओर दोहराया जाता है।

2. कलाई के घुमाव (30 सेकंड)

- [illegible]

3. ****त्समतीक (30 सेकंड, 18) ****

- 30-सेकंड (18) - 30-सेक - (स्म) - (स्म) - (स्म)
- (18) - (स्म) - (स्म) - (स्म)
- (30) - (स्म) - (स्म) - (स्म)
- (स्म) - (स्म) - (स्म)

Type something...



MULTI-LINGUAL COACH

RESULTS

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Pallav Maheshwari's Account

?

Resource list

Create resource +

Name	Group	Location	Product	Status	Tags
Filter by name or IP address...	Filter by group...	Filter...	Filter...	Filter...	Filter...
Compute (0)					
Containers (0)					
Networking (0)					
Storage (1)					
Cloud Object Storage-jv	Default	Global	Cloud Object Storage	Active	cpdaas
Converged infrastructure (0)					
Enterprise applications (0)					
AI / Machine Learning (2)					
watsonx.ai Runtime-qt	Default	Dallas (us-south)	watsonx.ai Runtime	Active	cpdaas
watsonx.ai Studio-pq	Default	Dallas (us-south)	watsonx.ai Studio	Active	cpdaas
Analytics (0)					
Blockchain (0)					
Databases (0)					
Developer tools (0)					
Observability (0)					
Migration (0)					
Integration (0+)					

RESOURCE USAGE

RESULTS

IBM watsonx

Upgrade ⓘ 🔔

Pallav Maheshwari's Accou... Dallas PM

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Fit-Saathi ✓ Deployed Online


API reference Test **Preview**

New chat +

Fit-Saathi 07:43 PM

Welcome to Fit-Saathi

Your personalized, all-in-one fitness buddy for workouts, meals, and daily motivation—anytime!



Quick start samples

Can you suggest a healthy meal plan for weight loss? →


What's a good beginner workout I can do at home? →

What should I wear for a morning run in summer? →


Give me a 10-minute stretch routine for the evening. →

➤

About this deployment ×


Name 


Fit-Saathi

Description 


Your personalized, all-in-one fitness buddy for workouts, meals, and daily motivation—anytime!

Deployment Details


Deployment ID: 895feb46-fc19-4c... 

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 

 [Fit-Saathi](#)

08cbab2d-d2e6-4f75-91e5-c853fb93e83b

Last modified

1 hour ago

Created on

Aug 1, 2025

DEPLOYED AI AGENT

RESULTS

IBM watsonx

Upgrade ⓘ 🔔 Pallav Maheshwari's Accou... Dallas PM

Deployment spaces / Fitness_Buddy / Fit-Saathi /

Fit-Saathi Deployed Online

API reference

Test

Preview

Endpoints for inferencing ⓘ

Private endpoint

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/895feb46-fc19-4cc4-a36c-346c598d3dc9/ai_service?version=2021-05-01

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/895feb46-fc19-4cc4-a36c-346c598d3dc9/ai_service_stream?version=2021-05-01

Public endpoint

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/895feb46-fc19-4cc4-a36c-346c598d3dc9/ai_service?version=2021-05-01

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/895feb46-fc19-4cc4-a36c-346c598d3dc9/ai_service_stream?version=2021-05-01

[Learn more](#) about the 2021-05-01 version query parameter

Code snippets

cURL

Java

JavaScript

Python

Scala

```
# NOTE: you must set $API_KEY below using information retrieved from your IBM Cloud account (https://dataplatfrom.cloud.ibm.com/docs/content/wsj/analyze-data/ml-authentication.html?context=)

export API_KEY=<your API key>

export IAM_TOKEN=$(curl --insecure -X POST --location "https://iam.cloud.ibm.com/identity/token" \
--header "Content-Type: application/x-www-form-urlencoded" \
--header "Accept: application/json" \
--data-urlencode "grant_type=urn:ibm:params:oauth:grant-type:apikey" \
--data-urlencode "apikey=$API_KEY" | jq -r '.access_token')

# TODO: manually define and pass values to be scored below
```

Bearer <token> ⓘ

IAM

About this deployment ×

Name

Fit-Saathi

Description

Your personalized, all-in-one fitness buddy for workouts, meals, and daily motivation—anytime!

Deployment Details

Deployment ID: 895feb46-fc19-4c...

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

Fit-Saathi

08cbab2d-d2e6-4f75-91e5-c853fb93e83b

Last modified

1 minute ago

Created on

Aug 1, 2025

API REFERENCES

RESULTS

[Deployment spaces](#) / [Fitness_Buddy](#) / [Fit-Saathi](#) /

Fit-Saathi ✓ Deployed Online

[API reference](#) [Test](#) [Preview](#)

New chat +

P

You 05:49 PM

What should I wear for a morning run in summer?

Fit-Saathi 05:49 PM

To stay comfortable and protected during a morning run in the summer, follow these recommendations:

1. **Lightweight, Moisture-Wicking Clothing:** Choose breathable, moisture-wicking fabrics like polyester or merino wool for your running shirt and shorts. Avoid cotton as it retains moisture and can become heavy when wet.

2. **Sun Protection:** Don a hat or use a visor to shield your face and eyes from the sun. A UV-protective running cap can be particularly beneficial. Consider wearing sunglasses as well to protect your eyes from harmful UV rays.

3. **Lightweight Socks:** Opt for moisture-wicking socks to keep your feet dry and reduce the risk of blisters.

4. **Running Shoes:** Ensure you have proper running shoes with adequate ventilation for better air circulation inside the shoe to keep your feet cool.

5. **Additional Accessories:** Apply a broad-spectrum sunscreen with an SPF of at least 30 on exposed skin, and consider using a sports sunscreen designed for active individuals. A lightweight hydration belt or handheld bottle can help you carry water or sports drinks, especially on longer runs.

Remember, it's essential to listen to your body and adjust your gear based on personal comfort and local climate conditions. Before heading out, check the weather forecast for temperature and humidity levels to help you decide what to wear for

type something...

About this deployment

Name

Fit-Saathi

Description

Your personalized, all-in-one fitness buddy for workouts, meals, and daily motivation—anytime!

Deployment Details

Deployment ID: 895feb46-fc19-4c...

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

Fit-Saathi

08cbab2d-d2e6-4f75-91e5-c853fb93e83b

Last modified

1 minute ago

Created on

Aug 1, 2025

edunet
foundation

CONCLUSION

- Fit-Saathi successfully demonstrates the potential of AI in delivering accessible and intelligent fitness support.
- It bridges the gap between users and professional fitness advice through conversational and contextual interaction.
- The tool's integration of various utilities, from BMI assessment to real-time guidance, enhances its usability.
- Fit-Saathi lays a strong foundation for future developments in personalized health tech and wellness automation
- Its multilingual capability makes it inclusive and adaptable to a wide range of user demographics.

FUTURE SCOPE

- **Personalized Workout Plans:** Integration of AI-driven dynamic fitness routines based on user goals and daily performance.
- **Voice Assistant Integration:** Enable interaction via Alexa, Siri, or Google Assistant for hands-free fitness support.
- **Advanced Health Analytics:** Incorporate data from smartwatches or fitness bands for more accurate insights
- **Gamification Features:** Add badges, fitness streaks, and challenges to boost motivation and user retention.
- **Community Engagement:** Introduce social features like workout groups, leaderboards, and progress sharing.
- **Mobile App Deployment:** Launch a cross-platform mobile app with offline support and push notifications.

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Pallav Maheshwari

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 15, 2025
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/38d66759-01c1-4ab7-83b1-4d1e6da11f98>



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IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Pallav Maheshwari

for the completion of

**Lab: Retrieval Augmented Generation with
LangChain**

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 23 Jul 2025 (GMT)

Learning hours: 20 mins

GITHUB LINK

- <https://github.com/Pallavv08/FitSaathi-FitnessBuddy-AI>



THANK YOU