

CAPSTONE PROJECT

GYMBUDDY FITNESS AGENT

Presented By:

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OUTLINE

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PROBLEM STATEMENT

- **Problem Statement:**

In today's fast-paced lifestyle, many individuals face challenges in maintaining a consistent and healthy routine due to lack of personalized guidance, motivation, and flexible fitness solutions. Traditional fitness platforms are often costly, rigid, and fail to adapt to individual needs, making it difficult for users to stay engaged with their health goals.

- **Proposed Solution:**

Fitness Buddy is an AI-powered virtual assistant built using IBM Cloud Lite and IBM Granite models. It provides personalized home workout suggestions, daily motivational tips, and simple, nutritious meal ideas through natural language interactions. Available anytime, it encourages habit formation and consistency, offering an accessible and intelligent alternative to traditional fitness coaching.

TECHNOLOGY USED

IBM cloud lite services

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

Fitness Buddy is an AI-powered virtual assistant designed to support users in building a healthy lifestyle. It offers personalized fitness, nutrition, and motivation—accessible anytime through natural conversation.






Key Features





- **Personalized home workout recommendations**
Suggests routines based on user fitness level, goals, and preferences.
- **Simple and healthy meal suggestions**
Provides easy-to-make, nutritious meal ideas aligned with wellness goals.
- **Daily motivational tips and habit reminders**
Sends encouraging messages and nudges to maintain consistency.
- **Natural language chat interface using IBM Granite**
Engages users in human-like conversations for a friendly experience.
- **24/7 access via cloud-based virtual assistant**
Always available, free, and scalable through IBM Cloud Lite.

END USERS


- Busy professionals
- Students
- Fitness beginners
- Remote workers
- Health-conscious individuals

RESULTS

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Agent preview

 GymBuddy 11:21 PM

Maintaining consistency in your diet can be challenging, but here are some strategies that might help:

1. **Set Clear Goals:** Knowing exactly what you're working towards can help keep you motivated.
2. **Meal Planning:** Plan your meals for the week ahead of time. This can help you avoid impulsive, unhealthy food choices.
3. **Prepare Your Meals:** Cook or prepare your meals in advance. This way, you know exactly what's going into your food and it's ready when you need it.
4. **Keep Healthy Snacks on Hand:** Having healthy snacks readily available can prevent you from reaching for less nutritious options when hunger strikes.
5. **Stay Hydrated:** Sometimes, our bodies confuse thirst for hunger. Drink plenty of water throughout the day.
6. **Track Your Intake:** Use a food diary or an app to track what you're eating. This can help you identify patterns and make healthier choices.
7. **Allow for Flexibility:** It's okay to indulge in your favorite foods occasionally. Deprivation can lead to cravings and binge eating.

Type something...  

RESULTS

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Agent preview

JK You: 11:22 PM

maintaining good physique

👤 GymBuddy 11:22 PM

Maintaining a good physique involves a combination of regular exercise, a balanced diet, and adequate rest. Here are some general tips:

- Regular Exercise:** Aim for at least 150 minutes of moderate-intensity or 75 minutes of high-intensity aerobic activity each week, along with strength training exercises at least 2 days a week.
- Balanced Diet:** Consume a variety of foods, including fruits, vegetables, lean proteins, whole grains, and healthy fats. Limit your intake of processed foods, sugars, and saturated fats.
- Stay Hydrated:** Drink plenty of water throughout the day, not just during workouts.
- Get Enough Sleep:** Aim for 7-9 hours of sleep per night. Sleep is crucial for muscle recovery and overall health.
- Consistency:** Make these habits a part of your lifestyle rather than a short-term goal.

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Agent preview

JK You: 11:24 PM

suggest a meal plan

GymBuddy 11:24 PM

I can certainly provide a general meal plan suggestion, but please remember that individual nutritional needs can vary greatly depending on factors like age, sex, weight, physical activity level, and overall health. It's always best to consult with a registered dietitian or nutritionist for a personalized meal plan. Here's a simple, balanced daily meal plan:

Breakfast:

- Whole grain cereal or oatmeal with fruits (like berries or banana) and a handful of nuts.
- A glass of low-fat milk or a dairy alternative.

Mid-Morning Snack:

- A piece of fruit, a handful of nuts, or a small yogurt.

Lunch:

- A lean protein source (like grilled chicken, tofu, or beans), a large serving of vegetables (salad, steamed broccoli, carrots), and a small portion of whole grains (brown rice, quinoa).

Afternoon Snack:

[🗑️](#) [➤](#)

RESULTS

Deployed AI Agent

The screenshot displays the IBM Watsonx web interface. At the top, the browser address bar shows the URL: `https://dataplatfom.cloud.ibm.com/ml-runtime/deployments/59c8e33b-95c8-45e3-9e3c-47258c545faf/chat?space_id=9940b394-2dcd-4249-86a4-f047e4890baa&context=wx&flush=true`. The header bar includes the IBM Watsonx logo, an 'Upgrade' button, a help icon, a notification bell, and user account information for 'JAYASHREE K J's Account' with a location dropdown set to 'Dallas' and a profile icon 'JK'.

The main content area shows the deployment path: [Deployment spaces](#) / [GymBuddy1](#) / [GymBuddy](#). Below this, the 'GymBuddy' deployment is shown with a green checkmark and the status 'Deployed Online'. A tabbed interface at the bottom includes 'API reference', 'Test', 'Evaluations', and 'Preview', with 'Preview' currently selected.

The chat interface in the 'Preview' tab shows a conversation:

- You 11:53 PM:** Staying consistent in hitting gym
- GymBuddy 11:53 PM:** Hi, I am watsonx.ai agent. How can I help you?
It seems like you're asking about maintaining consistency in your gym routine. Here are some tips that might help:
 - 1. Set Clear Goals:** Having a clear, measurable goal can help keep you motivated. This could be anything from losing weight to increasing your strength.
 - 2. Create a Schedule:** Consistency is key in fitness. Try to create a workout schedule that fits your lifestyle and stick to it.
 - 3. Start Small:** If you're new to the gym, start with lighter weights and fewer repetitions. As you get stronger, you can gradually increase the intensity of your workouts.

At the bottom of the chat window is a text input field with the placeholder 'Type something...' and a send button.

CONCLUSION

- Acts as a **virtual fitness agent** that generates personalized workout plans and healthy meal suggestions.
- Saves time by **automating routine tasks** like daily reminders, motivational messages, and habit tracking.
- Enhances **consistency, engagement, and wellness** through intelligent, 24/7 AI-powered support.

FUTURE SCOPE

- **Voice assistant integration** for hands-free interaction
- **Wearable device syncing** (e.g., fitness bands, smartwatches)
- **Progress tracking dashboard** with visual analytics
- **Mental wellness features** like guided meditation and stress tips
- **Multilingual support** for wider accessibility
- **Integration with nutrition/diet APIs** for advanced meal planning
- **Community support/chatrooms** to boost motivation and consistency

IBM CERTIFICATIONS

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professional excellence



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Completion Certificate



This certificate is presented to

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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/K-J-JAYASHREE/GymBuddy>



THANK YOU