CAPSTONE PROJECT

AI AGENT FOR FITNESS BUDDY

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OUTLINE

- **Problem Statement** (Should not include solution)
- **Proposed System/Solution**
- **System Development Approach** (Technology Used)
- **Algorithm & Deployment**
- **Result (Output Image)**
- **Conclusion**
- **Future Scope**
- **References**

PROBLEM STATEMENT

- **Example:** The challenge - 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.
- GITHUB LINK: **https://github.com/PIYALIGHOSH23/IBM-CLOUD-PROJECT**

PROPOSED SOLUTION

The aim of this system is to help individuals maintain a healthy lifestyle by providing timely, personalized fitness and nutrition advice. The solution integrates user-specific inputs with real-time guidance on workouts, meals, and motivation. It involves the following steps:

- User Data Collection:
  - Gather user info: age, gender, goals, diet, health, location.
- Data Processing & Personalization:
  - Analyze inputs to match workouts, meals, and motivation.
  - Provide simple, personalized suggestions.
- Building the Agent:
  - Use RAG model to fetch accurate health and fitness content.
  - Respond in a friendly, easy-to-understand way.
  - Support local languages for wider access.
- Deployment:
  - Mobile-first UI; usable on apps or messaging platforms.
  - Works in low-data or offline environments.
- Evaluation & Updates:
  - Collect user feedback regularly.
  - Update content based on trends and seasonal needs.

SYSTEM APPROACH

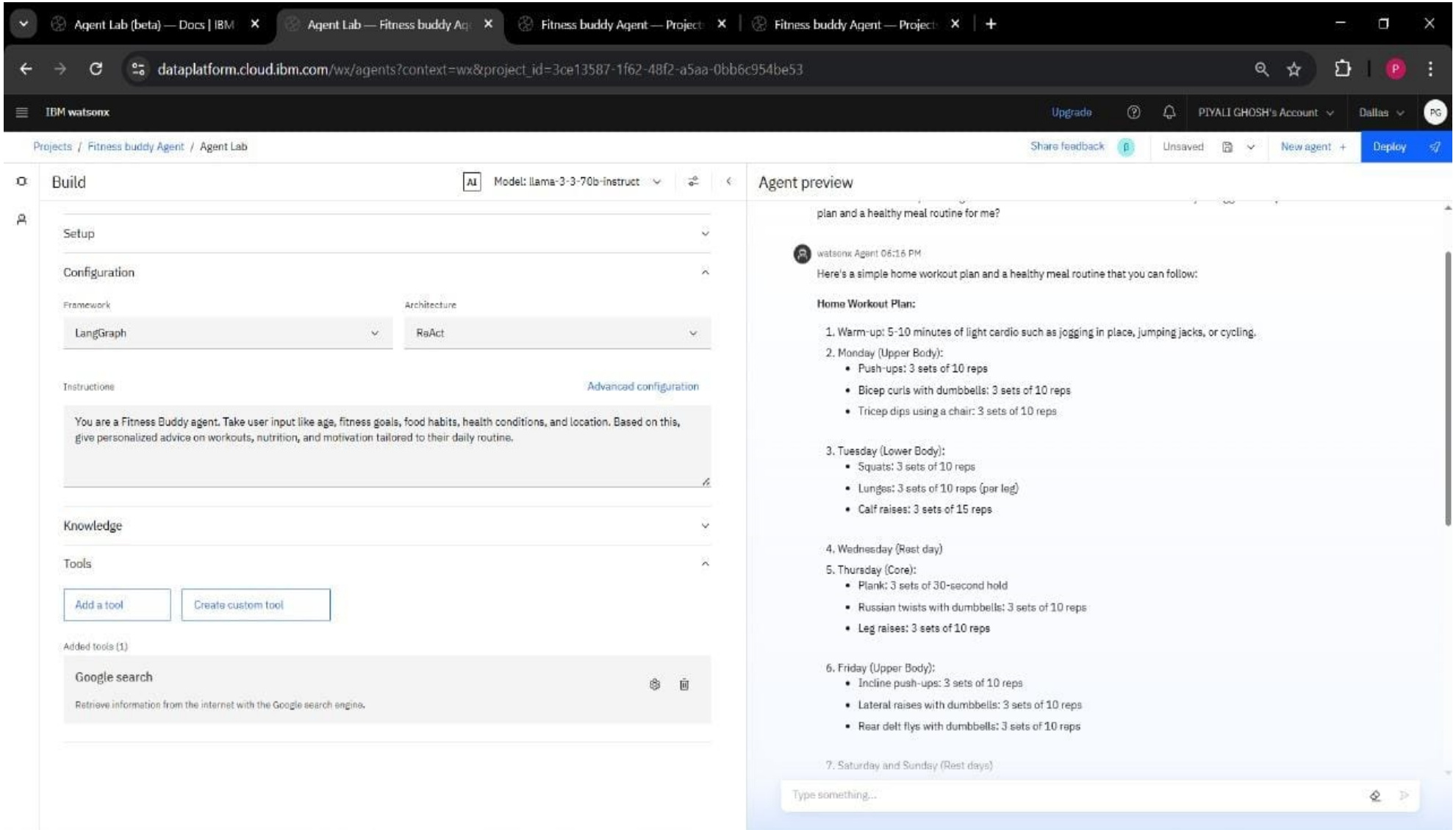
- Use of IBM Cloud Lite services / IBM Granite is mandatory.

ALGORITHM & DEPLOYMENT

Here's a structured breakdown:

- **Algorithm Selection:**
The system uses a Retrieval-Augmented Generation (RAG) model to fetch relevant fitness data (workouts, meal plans, motivational content) and delivers it in a simple, user-friendly way.
- **Data Input:**
Inputs include user age, gender, fitness goals, dietary preferences, medical history, and location.
- **Training Process:**
The agent is trained using fitness and nutrition data from verified health sources. Continuous user feedback is used to refine suggestions and improve personalization.
- **Response Process:**
Based on user queries and profile inputs, the system retrieves suitable routines, diet tips, and motivational advice in the user’s preferred language and tone.

RESULT



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CONCLUSION

- Fitness Buddy successfully addresses the lack of personalized fitness guidance by offering an on-demand, user-friendly, and flexible AI solution that fits into the user's daily life and promotes healthy living.

FUTURE SCOPE

- Add voice assistant integration for hands-free use
- Include wearable device support (smartwatch, fitness bands)
- Track real-time activity and diet logs
- Expand to support multiple languages
- Enable progress tracking and weekly health reports

REFERENCES

- IBM watsonx documentation
- WHO physical activity guidelines
- Indian Council of Medical Research (ICMR) nutrition data
- Google Search API
- General health and wellness datasets

IBM CERTIFICATIONS

Screenshot/ credly certificate(getting started with AI)

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IBM CERTIFICATIONS

- Screenshot/ credly certificate(Journey to Cloud)

IBM CERTIFICATIONS

- Screenshot/ credly certificate(RAG Lab)

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THANK YOU

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