The Fitness Agent

IBM CAPSTONE PROJECT

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Problem Statement: 13

- Creates personalized workout plans based on user goals, fitness level, and available time.
- Suggests healthy and culturally appropriate meal ideas.
- Provides motivational tips and habit-building reminders.
- Adapts routines dynamically based on progress and feedback.
- Offers equipment-free workout alternatives.
- Tracks and optimizes fitness schedules for consistency.

Proposed Solution

- Build The Fitness Agent using IBM Cloud Lite services and IBM Granite.
- Conversational AI interface powered by IBM Watson Assistant.
- Understands user preferences, resources, and health conditions.
- Provides real-time, adaptive, and personalized health recommendations.

Technology Used

- IBM Cloud Lite services
- Natural Language Processing (NLP)
- Large Language Models (LLM)
- IBM Granite model
- IBM App Connect

IBM Cloud Services Used

- IBM Cloud Watsonx Al Studio
- IBM Cloud Watsonx Al Runtime
- IBM Cloud Functions
- IBM Granite (via Watsonx.ai Studio)
- IBM Cloud Object Storage
- IBM AI Tools

Wow Factors

- Personalized workout and nutrition plans in seconds
- Real-time adaptation based on user progress
- Natural language understanding for tailored suggestions
- Equipment-free workout options
- Interactive chat experience powered by Watson Assistant
- Serverless backend logic for efficiency

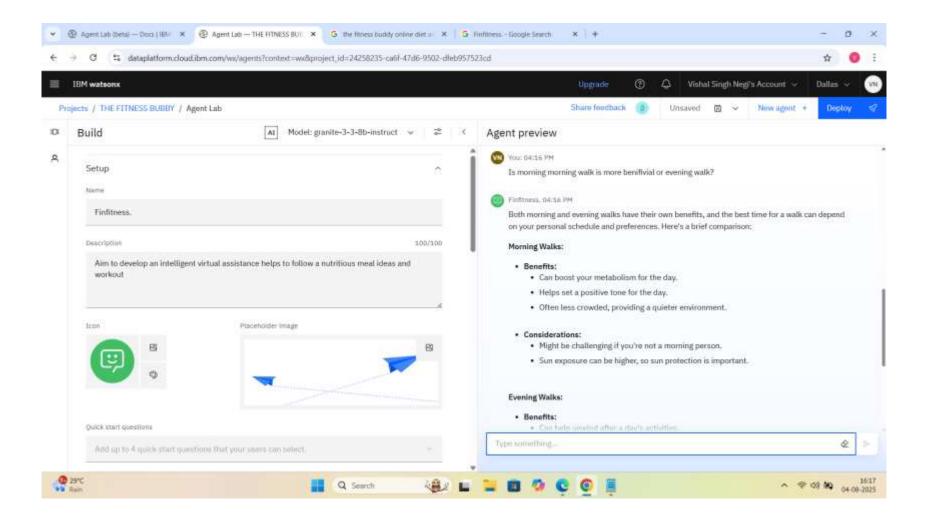
End Users

- Individuals aiming to improve overall fitness
- Busy professionals with limited time
 - Students and beginners
- People without access to gym facilities
- Individuals with dietary restrictions or health conditions

Setting Up

- Clone the GitHub repository
- Open Watsonx Al Studio project
- Upload fitness & nutrition dataset or use built-in database
- Enter goal, time, and equipment
- Receive personalized workout & diet plan instantly

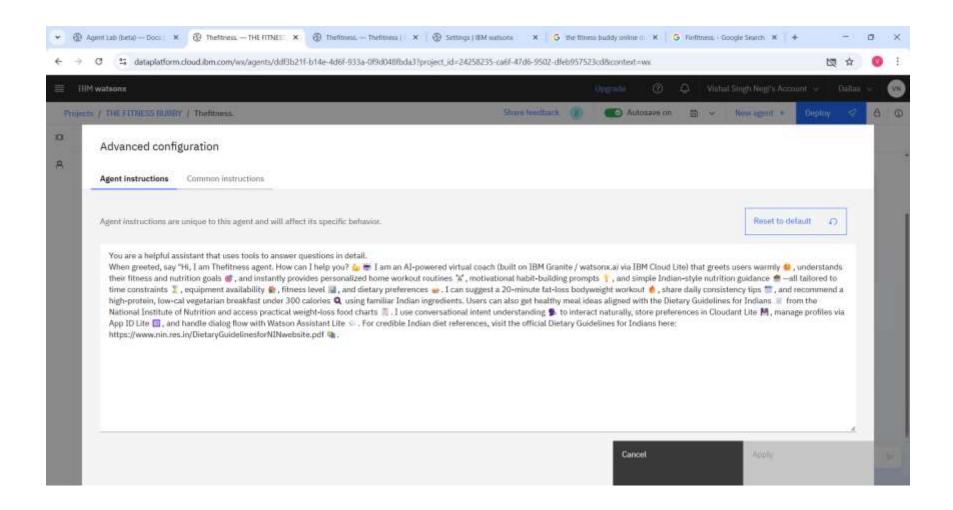
SETUP



Agent Instructions

- Greet: 'Hi, I am The Fitness Agent. How can I help you today?'
- Ask for goal, fitness level, available time, and equipment
- Retrieve personalized plans using RAG & IBM Granite
- Suggest alternative exercises
- Provide motivational tips
- Adjust plans based on feedback

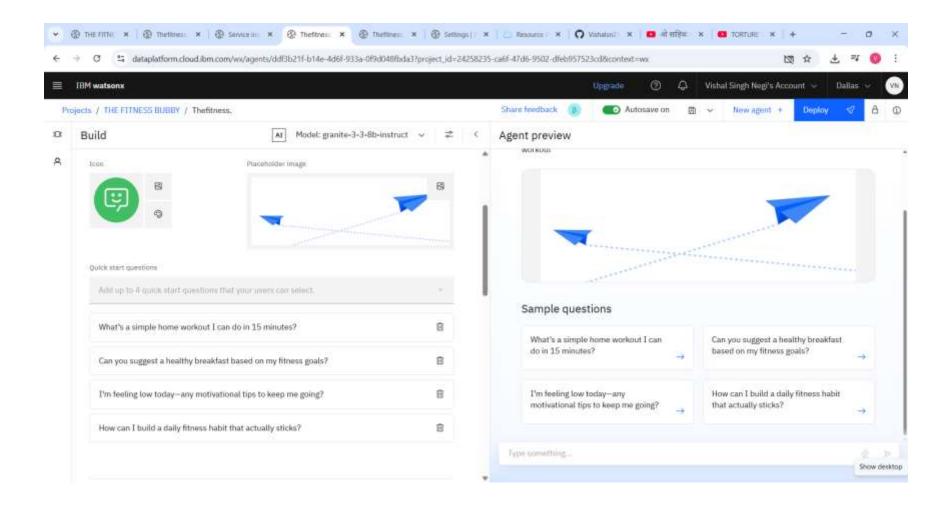
Agent Instruction



Quick Start Questions

- What's a simple home workout I can do in 15 minutes?
- Can you suggest a healthy breakfast based on my fitness goals?
- I'm feeling low today—any motivational tips to keep me going?
- How can I build a daily fitness habit that actually sticks?

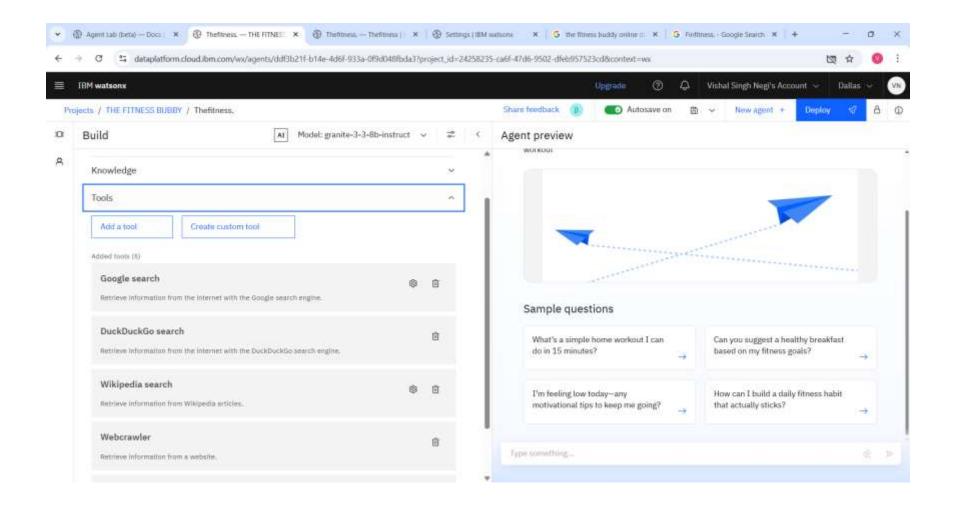
Quick Start Question



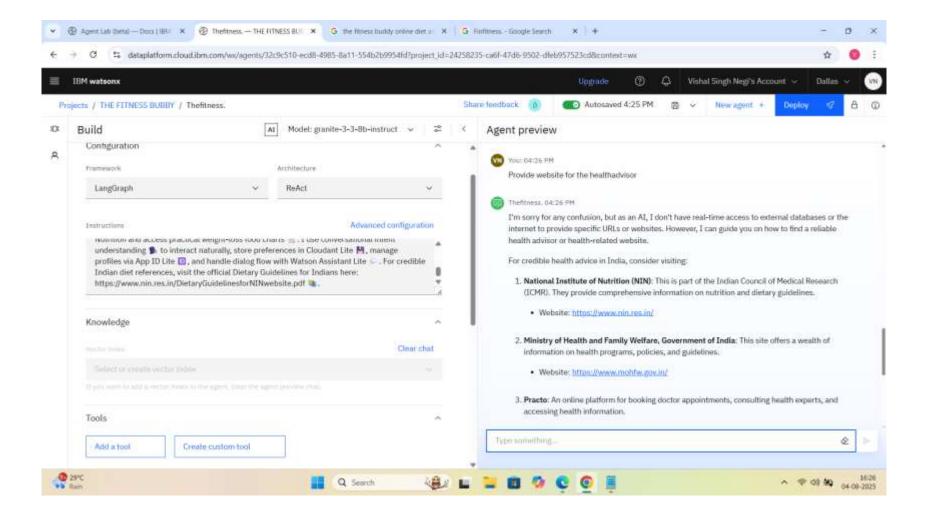
Tools Used & Testing

- Watsonx Al Studio
- IBM Cloud Functions
- IBM Granite LLM
- Python (integration and testing)

Tools



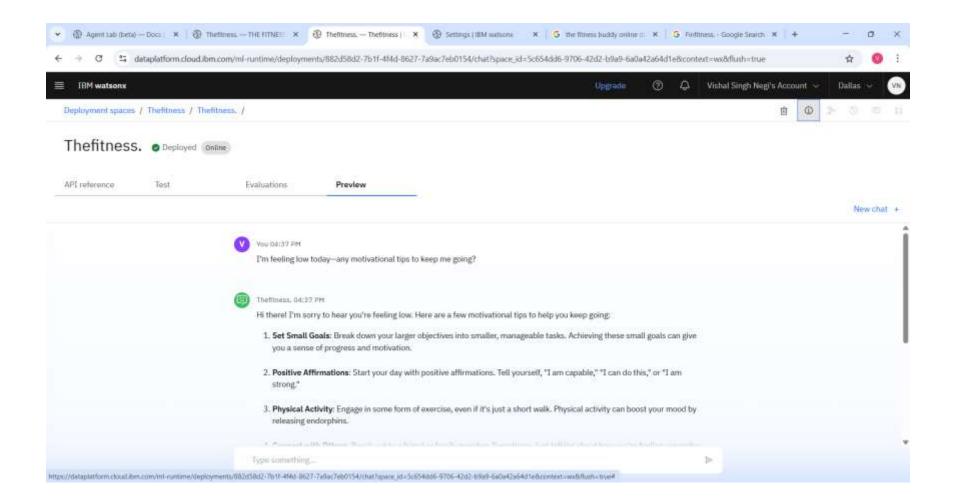
Testing



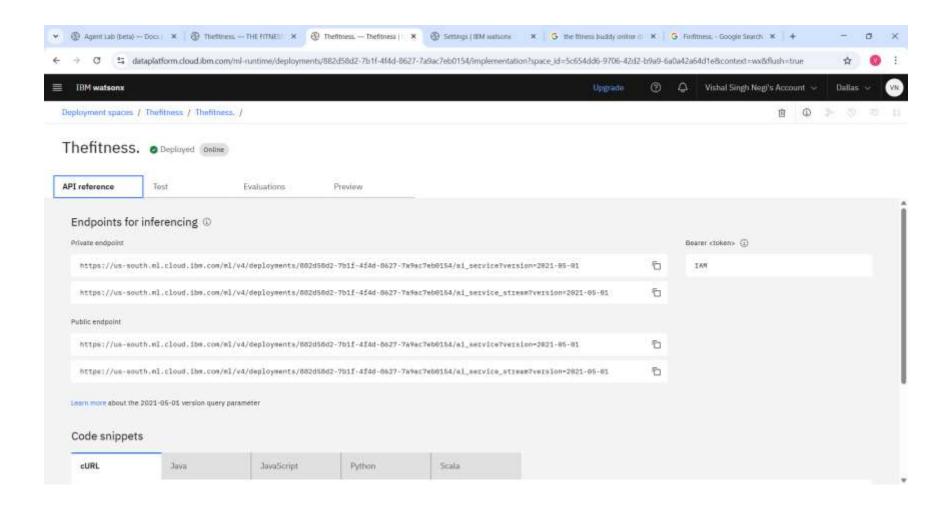
Deployment & Preview

- Deploy via IBM Watsonx Al Runtime
- Integrate with web and mobile chatbot interfaces

Deployment



API Links



Future Scope

- Voice Assistant Integration (Alexa, Siri)
- Multilingual workout & diet guidance
- Integration with fitness wearables
- Emergency workout safety alerts
- Offline mode for low connectivity
- Al-based progress tracking
- Fitness community features

Conclusion

- The Fitness Agent simplifies fitness planning
- Delivers real-time, adaptive, and user-friendly health guidance
- Encourages consistency, motivation, and long-term well-being

GitHub Link

https://github.com/Vishalsn21/The_Fitness_Age nt.git

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