IBM HACKATHON PROJECT

NUTRIBUDDY – AI NUTRITION ASSISTANT

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OUTLINE

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PROBLEM STATEMENT

Modern diets lack personalization. People often consume meals without understanding their nutritional value, impacting health, fitness goals, and medical conditions. People often lack access to real-time, personalized nutrition advice that is easy to understand and act upon. Traditional diet plans are static, non-interactive, and rarely integrate cultural preferences or live data sources.



TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

IBM Granite model

Google Search Tool

LangGraph + ReAct



IBM CLOUD SERVICES USED

- IBM Cloud Watsonx Al Studio
- IBM Cloud Watsonx Al runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model
- Agent Lab (LangGraph + ReAct)
- Cloud Object Storage
- IBM Deployment Spaces



WOW FACTORS

Real-time Meal Analysis using Natural Language

Al-Powered Pesonalized Nutrition Assistant

Integrated Google Search Tool for Dynamic Recommendations

Uses IBM Granite Foundation Model with ReAct Architecture

Fully Deployable via Watsonx Agent Lab – No Code Required

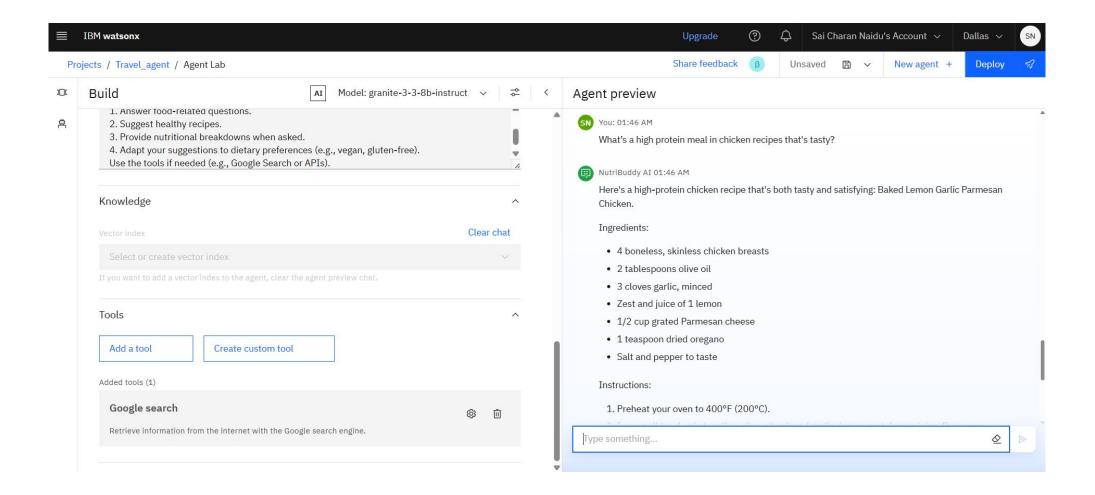
Supports Diet Planning, Calorie Estimation, and Healthy Recipes



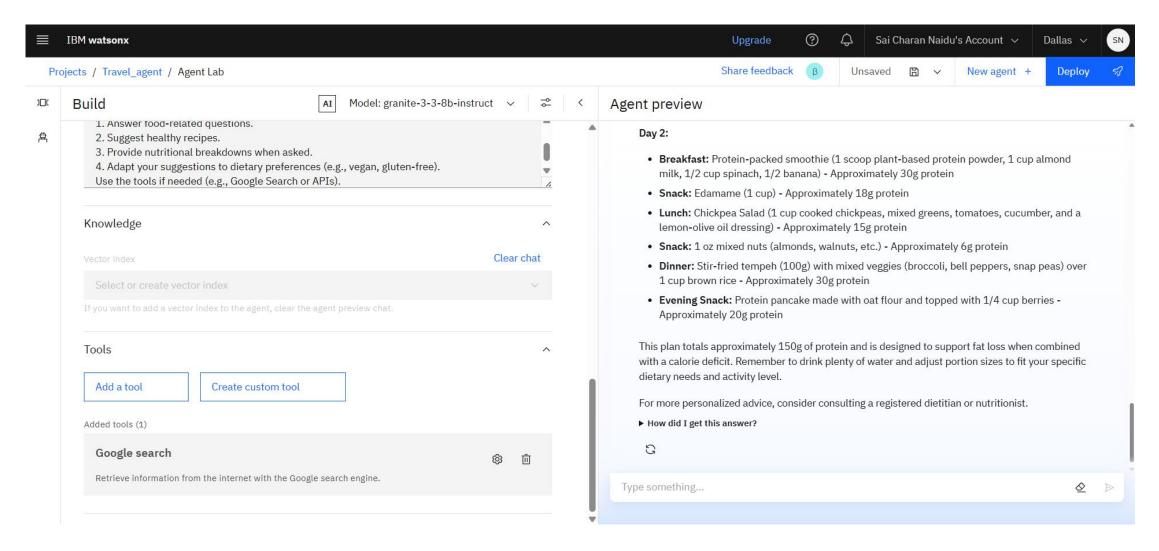
END USERS

- Health-conscious Individuals
- Fitness Enthusiasts and Athletes
- Nutritionists and Dietitians
- Healthcare Providers and Wellness Coaches
- Educational Institutions for Diet & Nutrition Programs
- Startups and Developers in Health Tech Domain

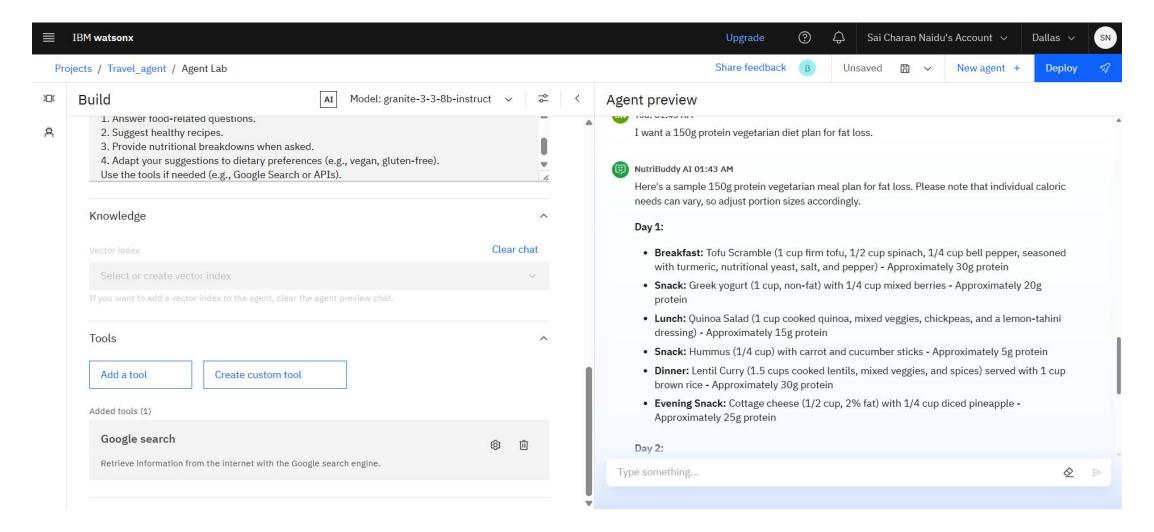






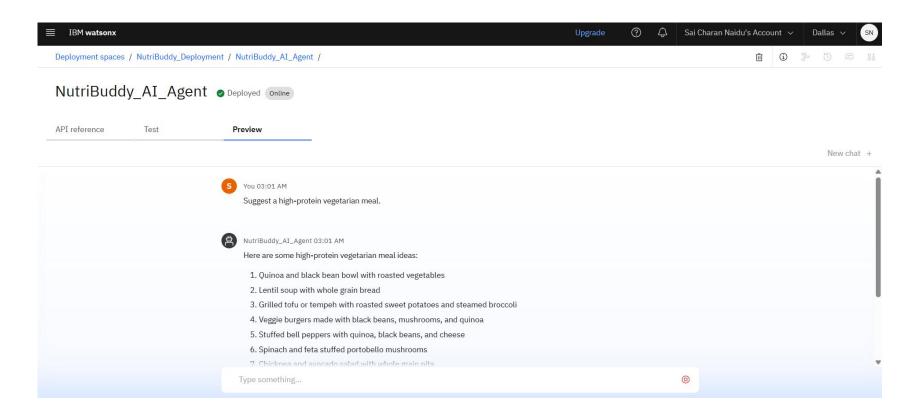








Deployed AI Agent





CONCLUSION

The NutriBuddy AI Nutrition Assistant demonstrates how powerful foundation models like IBM Granite can be leveraged to deliver personalized, real-time nutritional insights. By integrating Natural Language Processing and web search capabilities, the agent enables users to make informed dietary choices instantly. This project showcases the potential of AI in transforming everyday health decisions into smarter, data-driven actions.



GITHUB LINK

https://github.com/saicnaidu27/NutriBuddy-Al-Agent/tree/b0e836efdb08f3a7897622f60bd88308fbaad153



FUTURE SCOPE

- Custom User Profiles: Add login system to store age, goals, allergies, and preferences.
- Voice Interaction: Integrate voice-based queries using IBM Watson Speech-to-Text and Text-to-Speech.
- Wearable Integration: Sync with fitness trackers (like Fitbit, Apple Watch) for activity-based diet suggestions.
- Recipe Generator Tool: Automatically generate recipes based on fridge ingredients or regional preferences.
- Indian Food Database Integration: Link with APIs like HealthifyMe, MyFitnessPal, or USDA.
- Multilingual Support: Expand to regional Indian languages using NLP models for inclusivity.
- Meal Plan Export: Allow users to download weekly diet charts in PDF or calendar format.
- Dietician Connect: Suggest nearby certified professionals for medical-grade advice.
- Al Coach + Chat App: Deploy as a WhatsApp bot or mobile app for real-time feedback.



IBM CERTIFICATIONS

IBM SkillsBuild

Completion Certificate



This certificate is presented to

SAI CHARAN NAIDU P

for the completion of

Introduction to Artificial Intelligence

(MDL-211)

According to the Moodle system of record

Completion date: 18 Jul 2025 (GMT)

Learning hours: 1 hr 15 mins



IBM SkillsBuild

Completion Certificate



This certificate is presented to

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Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 18 Jul 2025 (GMT)

edunet

Learning hours: 20 mins

THANK YOU

