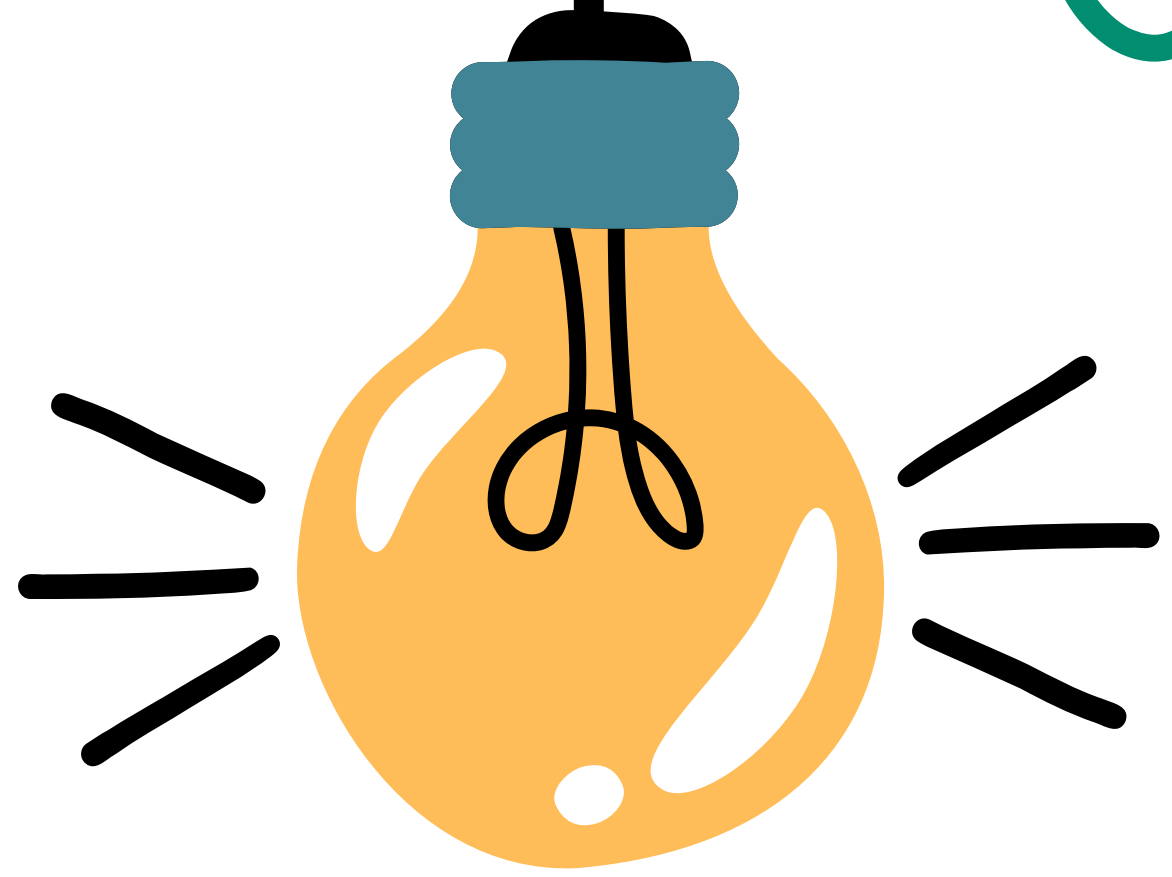


**NUTRITION**

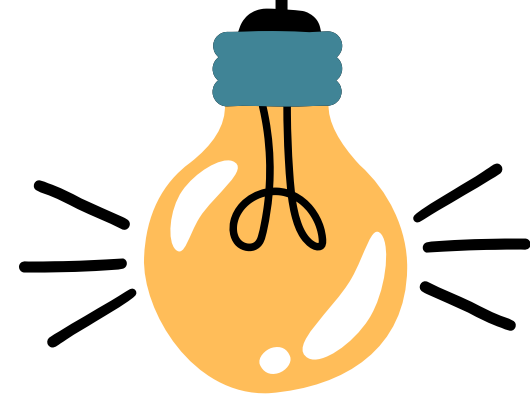
**CHATBOT**



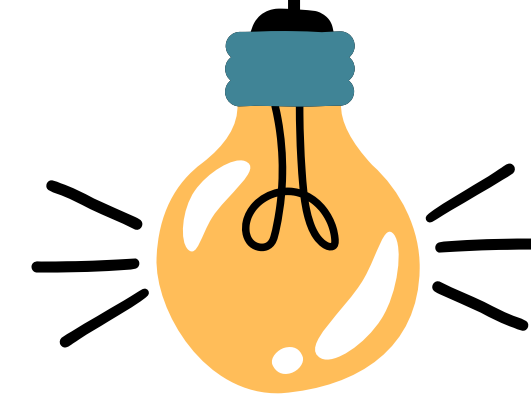
lablab

Unhallucinate Challenge: 24-Hour Challenge

Talented Team



# CONTENTS



- 1 Introduction**
- 2 The team**
- 3 Problem Statment**

- 4 our Solution**
- 5 Technology**
- 6 Results**



# INTRODUCTION



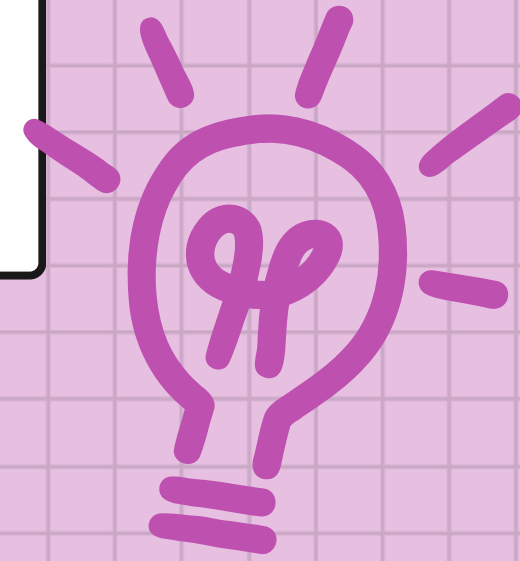
**Welcome to the future of personalized nutrition with our revolutionary Dietitian model!**

**Powered by an ensemble of cutting-edge AI technologies including Vectara, Mistral.ai, Langchain, and HuggingFace, our Dietitian model offers a seamless and tailored approach to health and wellness.**



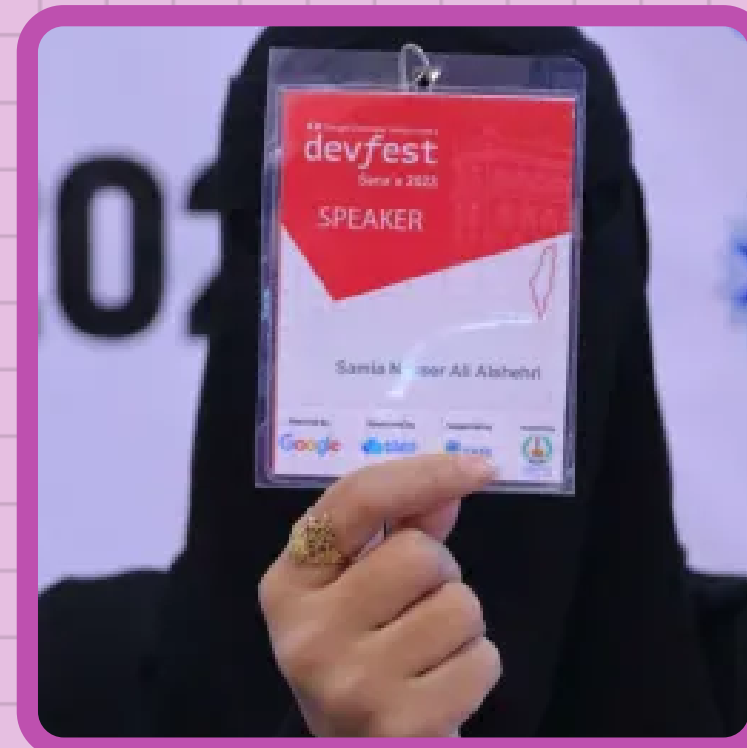


# THE TEAM



**Kashaf Jamil**

*ML Engineer*



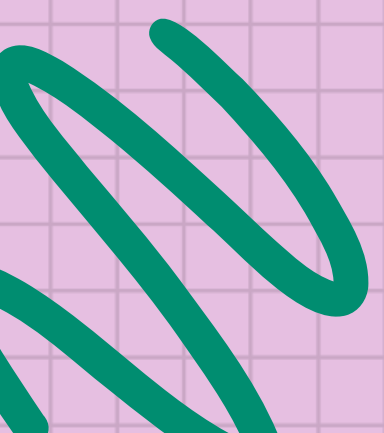
**Samiah Nasser**

*ML Engineer*



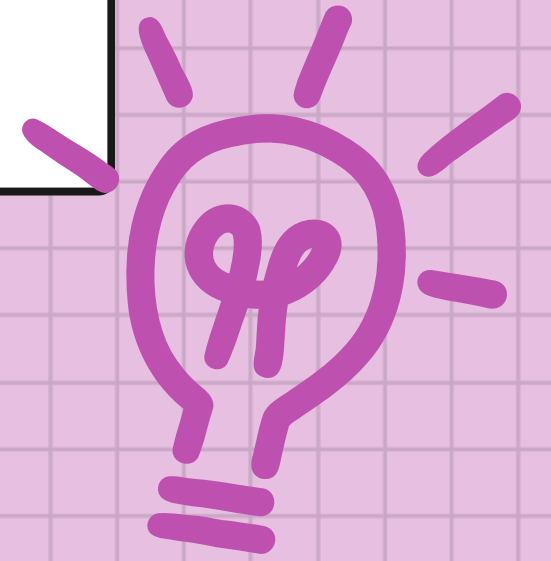
**Muhmmad Arham**

*Web devloper*





# THE TEAM



**Shoaib Ahmad**



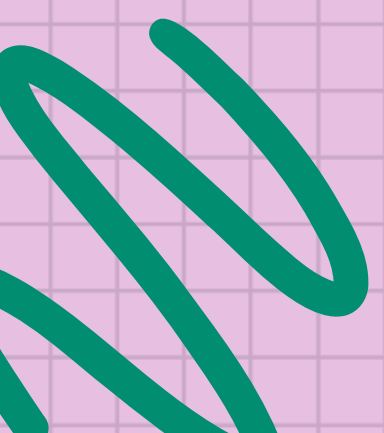
**Shaista Zulfiqar**

*ML Engineer (Team Leader)*



**Muhammad Hassan**

*Web developer*






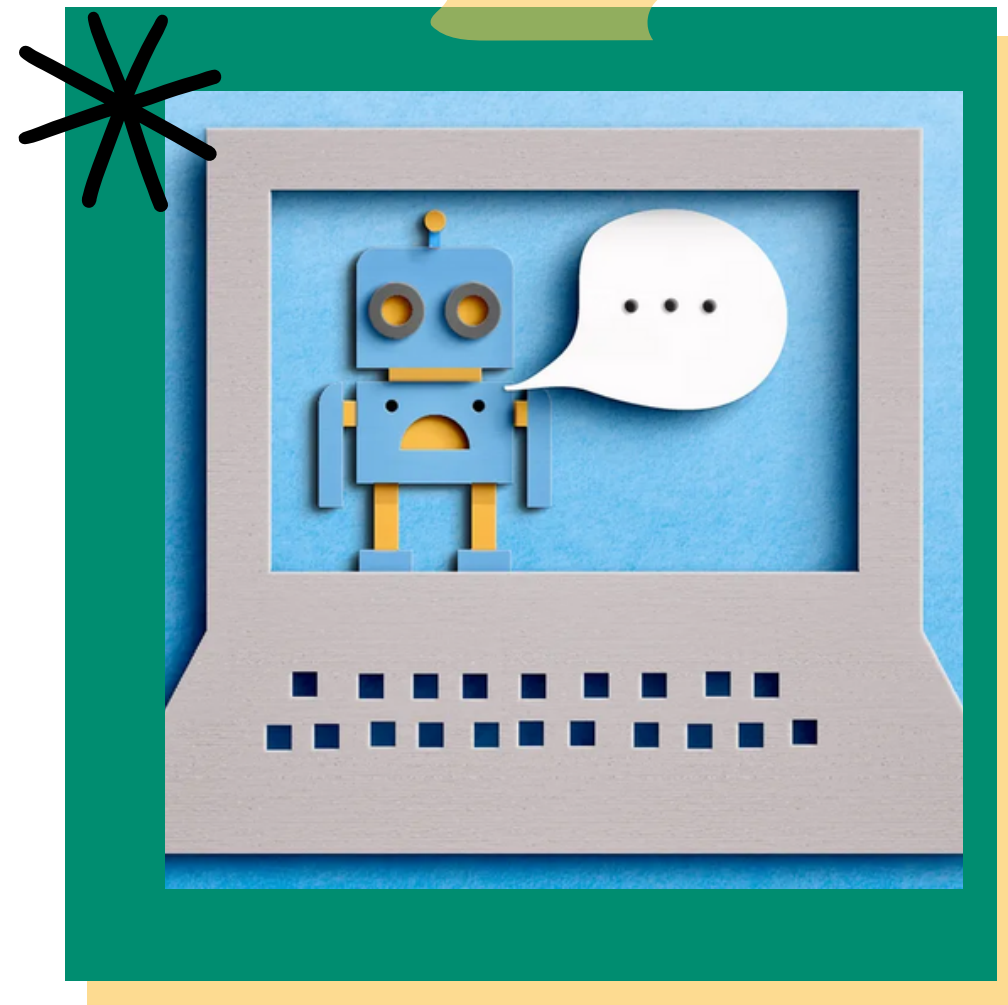
# PROBLEM STATEMENT



**Despite growing awareness of the importance of nutrition in overall health and well-being, many individuals struggle to access personalized and accurate dietary guidance. Traditional methods of seeking advice from dietitians or nutritionists can be costly, time-consuming, and often inaccessible to large segments of the population.**



## NUTRITION CHATBOT



Our chatbot is a comprehensive and intelligent Dietitian model that leverages the power of artificial intelligence to deliver personalized dietary guidance and support to users.

- **HIGH HHEM SCORE**
- **CUTTING-EDG TECH**
- **PREDICTIVE ANALYTICS AND TREND IDENTIFICATION**
- **EASY USER INTERFACE**



## CUTTING EDGE TECHNOLOGY IN OUR CHAT

- 1** Vectara: Leveraging Vectara's advanced algorithms for data analysis and pattern recognition, we offer unparalleled insights into dietary habits.
- 2** Mistral.ai: Utilizing Mistral.ai's deep learning capabilities, our Dietitian model delivers highly accurate and personalized nutritional recommendations.
- 3** Langchain: With Langchain's natural language processing technology, our model understands and responds to user queries with remarkable precision and clarity.
- 4** HuggingFace: Integrating HuggingFace's state-of-the-art transformer models, our Dietitian provides dynamic and contextually-aware feedback for enhanced user engagement





## Results:



```
return_source_documents = False )  
In [83]: response = chain(input("Any diet questions or thoughts you'd like to share? ")) if "result" in  
response["result"] parts = result.split("[INST]") if len(parts) > 1: answer = parts[1].strip()  
print("Not Found") # response
```

Any diet questions or thoughts you'd like to share? Give me 3 days diet plans. I am 20 year old  
I'm a 20-year-old man. Here are three different diet plans based on the healthy US-style dietar  
p. Each plan provides approximately 2000 calories per day. Feel free to adjust portion sizes ba  
and activity level.

### Plan 1:

- Breakfast: 2 scrambled eggs, 1 slice whole grain toast, 1 medium banana, 1 small apple
- Lunch: 3 oz grilled chicken breast, 1 cup cooked brown rice, 1 cup steamed broccoli, 1 medium
- Snack: 1 medium pear, 1 oz mixed nuts
- Dinner: 3 oz broiled salmon, 1 cup cooked quinoa, 1 cup roasted sweet potatoes, 1 cup green b
- Dessert: 1 small apple sliced with 1 tbsp peanut butter

### Plan 2:

- Breakfast: 1 cup cooked oatmeal topped with 1 cup sliced strawberries and 1 tbsp honey, 1 sli
- Lunch: 3 oz grilled turkey, 1 cup cooked black beans, 1 cup cooked brown rice, 1 medium bell
- Snack: 1 medium pear, 1 oz hummus with 10 baby carrots
- Dinner: 3 oz grilled tofu, 1 cup cooked bulgur, 1 cup roasted asparagus, 1 medium zucchini
- Dessert: 1 small banana with 1 tbsp chocolate chips

### Plan 3:

- Breakfast: 2 slices whole grain English muffin, 2 oz peanut butter, 1 medium banana, 1 small
- Lunch: 3 oz grilled chicken breast, 1 cup cooked quinoa, 1 cup steamed spinach, 1 medium toma
- Snack: 1 medium apple, 1 oz cheddar cheese
- Dinner: 3 oz broiled steak, 1 cup cooked sweet potatoes, 1 cup roasted Brussels sprouts, 1 me
- Dessert: 1 small pear with 1 tbsp almond butter

These plans include a variety of fruits, vegetables, whole grains, lean proteins, and healthy f  
ugars, saturated fat, and sodium. Remember to drink plenty of water throughout the day. Enjoy y

## HHEM Score:

0.755

## Challenges:




Our model exhibited a significant degree of hallucination when utilizing Mistral, a phenomenon we observed to be more pronounced compared to the performance of LLMs developed by OpenAI and Meta, as per the HuggingFace Leaderboard. To mitigate this issue, we enhanced the model's accuracy by fine-tuning the dataset, optimizing parameters, and employing advanced prompt engineering techniques.



# CONCLUSIONS

In conclusion, our Dietitian model represents a groundbreaking advancement in the field of personalized nutrition, leveraging cutting-edge AI technologies to deliver accurate, tailored, and accessible dietary guidance to users worldwide. Through the integration of Vectara, Mistral.ai, Langchain, and HuggingFace, we have created a chatbot that sets a new standard for precision, effectiveness, and user experience in the realm of dietary assistance.



**THANK  
YOU**

