

# MeaiPlanner ×

An Al-Powered Meal Plan Generator



Final Project Presenter: Mohan Qi Spring 2024 CS 5004 & 5005

## Agenda ....

- ✗ Goals and Rationale
- Tools & Methods
- ✗ Demo & OOD Concepts
- Lessons Learned
- X Limitations & Future Extensions



### Why This?





### Tools & Framework



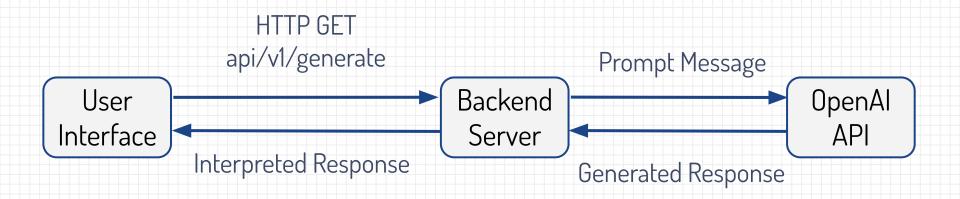




Frontend Framework

Backend Framework GPT-3.5-turbo GPT-4

#### How does it work?



### Demo Time!

Demo Video



#### **OOD Concepts**

- UI Panels and Components
  - Encapsulation/Composition/Polymorphism
- Data Classes: MealPlan, DietPreferences
  - Encapsulation
- MVC (Model-View-Controller)



#### Lessons Learned

- Java Swing
- Spring Boot & Spring Al
- Basic Al concepts
  - Prompt formulation
  - o GPT models
  - Tokens



#### Limitations & Future Extensions

- IIII GIIOIIS & LOTOI E LATEIISIOIIS
- Speed
- Rate Limit of OpenAl API
- Accuracy
  - Nutrient Info
- Fine-Tuning the Model
  - More training and data needed
- Integrate more features and customizations



#### References

- 1. <a href="https://platform.openai.com/docs/overview">https://platform.openai.com/docs/overview</a>
- 2. <a href="https://spring.io/projects/spring-ai">https://spring.io/projects/spring-ai</a>
- 3. <a href="https://github.com/spring-projects/spring-ai">https://github.com/spring-projects/spring-ai</a>
- 4. <a href="https://docs.oracle.com/javase/tutorial/uiswing/">https://docs.oracle.com/javase/tutorial/uiswing/</a>
- 5. <a href="https://spring.io/guides/tutorials/rest">https://spring.io/guides/tutorials/rest</a>
- 6. <a href="https://spring.academy/courses/building-a-rest-api-with-spring-boot">https://spring.academy/courses/building-a-rest-api-with-spring-boot</a>

#### Images:

- 1. FaceBook Group: RD or Related Memes
- 2. <a href="http://www.unicodesystems.us/swing.html">http://www.unicodesystems.us/swing.html</a>
- 3. https://techwithmaddy.com/spring-boot-architecture
- 4. <a href="https://www.webfx.com/blog/marketing/what-is-openai/">https://www.webfx.com/blog/marketing/what-is-openai/</a>



# Any Questions?

