



PIZZALAND

PIZZA ORDERING CHATBOT

Task-Oriented Dialog System using Rasa

INTRODUCTION

- Pizzaland is a chatbot that allows users to:
 - ☐ Order pizza
 - ☐ Modify their order
 - ☐ Track their order status
 - ☐ Cancel an order
 - ☐ Get store hours and delivery estimates



KEY FEATURES

- **Order Pizza** (Specify type & size)
- **Modify Orders** (Add/remove toppings)
- **Track Orders** (Real-time status updates)
- **Cancel Orders**
- **Store Hours Information**
- **Weather in real-time**
- **Error Handling for Unexpected Inputs**



EXAMPLE CONVERSATIONS

- **Scenario 1: Ordering a Pizza**

User: I want to order a pizza

Bot: What kind of pizza would you like?

User: A large Pepperoni

Bot: Your order for a large Pepperoni pizza has been placed!

- **Scenario 2: Tracking an Order**

User: Where is my pizza?

Bot: Your order is being prepared and will be delivered in 30 minutes.



CHALLENGES & SOLUTIONS

- **Challenge 1: Bot Repeating the Same Question**

Solution: Fixed issue in stories.yml where the bot would ask the user for pizza details multiple times. Adjusted rules and action handling to prevent duplicate prompts.

- **Challenge 2: Custom Actions Not Executing**

Solution: The bot initially failed to execute action_confirm_order. The problem was traced to a missing endpoints.yml configuration. Fixed by correctly setting up the action server.

- **Challenge 3: User Input Not Being Understood**

Solution: The bot struggled with variations like *"Can I add toppings?"* vs. *"I want mushrooms."* Improved the nlu.yml file by adding more diverse training examples.

- **Challenge 4: Weather API Not Responding**

Solution: API errors caused the bot to crash when fetching weather data. Implemented a **try-except block** in actions.py to return a default response if the API failed.

- **Challenge 5: Incorrect Order Modifications**

Solution: The bot sometimes treated **"Remove olives"** as an addition instead of a removal. Fixed action_modify_order logic to properly distinguish between adding and removing ingredients.



FUTURE IMPROVEMENTS

- ☐ Add **user authentication & order history**
- ☐ Integrate with **restaurant POS system**
- ☐ Improve **NLU & conversational flow**

