

Lab Test – 01

Q1. Zero-shot Prompting in Healthcare [5M]

Scenario: A doctor uses an AI tool to quickly triage patient symptoms into “Mild,” “Moderate,” or “Severe.”

- Task 1: Write a zero-shot prompt that classifies the severity of symptoms without giving any examples.
- Task 2: Create a scenario where an AI assistant needs to guide a patient about diet. Write two prompts: one without context and one with detailed context (e.g., age, health condition, dietary restrictions).

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## Q1: Zero-shot Prompting in Healthcare Untitled-3 ●
1  ## Q1: Zero-shot Prompting in Healthcare
2
3  **Task 1: Zero-shot prompt for symptom severity classification**
4
5  Prompt:
6
7  Classify the severity of the following symptoms as "Mild", "Moderate", or "Severe".
8
9  Symptoms: [sweating, shivering, cold]
10
11 Severity:
12 ---
13 Expected Output:
14
15 Mild
16
17 "A balanced daily diet should include:-"
18
19 Breakfast: Whole grain cereal with low-fat milk and fruit.
20
21 Lunch: Grilled vegetables, lean protein (chicken/fish), and whole grains.
22
23 Dinner: Light soup, salad, and whole grain bread.
24
25 Snacks: Nuts, yogurt, and fruits.
26
27 Drink plenty of water and avoid processed foods."
```

Task 2: AI assistant guiding patient about diet

Scenario: An AI assistant needs to guide a patient about diet.

Prompt without context:

What dietary recommendations can you provide?

Prompt with detailed context:

The patient is a 65-year-old male with type 2 diabetes and a history of heart disease. He is also lactose intolerant. Provide dietary recommendations suitable for his age, health conditions, and dietary restrictions, focusing on managing blood sugar and promoting heart health.

Expected Output:

"Recommended Diet Plan:

Breakfast: 2 whole wheat chapatis with a bowl of vegetable curry (no added salt) and a small portion of unsweetened oatmeal.

Mid-morning snack: A handful of almonds or walnuts.

Lunch: Brown rice with dal (lentils), steamed broccoli, spinach, and cucumber salad.

Evening snack: Roasted chickpeas or sprouts with lemon.

Dinner: Mixed vegetable soup, quinoa with sautéed vegetables, and a glass of buttermilk (low salt).

Guidelines: Avoid fried food, limit salt, use olive or mustard oil in small amounts, and maintain portion control. Drink at least 8 glasses of water daily."

Q2. One-shot vs Few-shot for Customer Support

[5M]

Scenario: An e-commerce company uses AI to classify support emails into “Refund,” “Order Status,” or “Technical Issue.”

- Task 1: Write:
 - A one-shot prompt with 1 example of classification.
 - A few-shot prompt with 3–4 examples.
- Task 2: Use the same incoming email text for both prompts. Compare how the outputs differ and explain why.

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57
58  ## Q2: One-shot vs Few-shot for Customer Support
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60  **Task 1: Prompts for email classification**
61
62  *One-shot prompt:*
63
64  Example:
65  Email: "I have not received my order (Order #12345) placed two weeks ago."
66  Classification: Order Status
67
68  Email: [Insert incoming email text here]
69  Classification:
70
71  *Few-shot prompt:*
72
73  Example 1:
74  Email: "My order arrived damaged. I want a full refund."
75  Classification: Refund
76
77  Example 2:
78  Email: "I can't log in to my account. I keep getting an error message."
79  Classification: Technical Issue
80
81  Example 3:
82  Email: "Where is my package? The tracking number hasn't updated in 5 days."
83  Classification: Order Status
84
85  Email: [Insert incoming email text here]
86  Classification:
87
88  OUTPUT
89
90  "My order hasn't arrived yet and I want to know when it will be delivered."|
```

```
94 **Task 2: Comparison of outputs**  
95  
96 Incoming Email Text (used for both prompts): "The screen on my new phone flickers constantly. What should I do?"  
97  
98 *Expected Output (One-shot):* Potentially misclassified if the one-shot example is not relevant. Could be classified as "Order Status" if the example used in the one-shot prompt was about order issues.  
99  
100 *Expected Output (Few-shot):* More likely to be correctly classified as "Technical Issue" because the multiple examples provide a better understanding of the different categories.  
101  
102 *Explanation:*  
103  
104 The few-shot prompt provides the AI with more context and examples, allowing it to better understand the nuances of each category. The one-shot prompt relies heavily on the single example provided, which may not be representative of all cases. Therefore, the few-shot prompt is generally more accurate and reliable for email classification.
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