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AI-ASSISTED-CODING

TASK-1:

PROMPT

#Create or collect 10 short email samples, each belonging to one of the 4 categories..

|  |  |  |
| --- | --- | --- |
|  | **Email samples** | **Category** |
| 1. | I have not received my invoice for last month. | Billing |
| 2. | My internet connection keeps dropping every few minutes. | Technical Support |
| 3. | Just wanted to say your support team was incredibly helpful. | Feedback |
| 4. | Can I change my billing cycle to the 15th of each month? | Billing |
| 5. | I’m getting an error when I try to log into my account. | Technical Support |
| 6. | Please pass on my thanks to your awesome customer service rep! | Feedback |
| 7. | What are your support hours during holidays? | Others |
| 8. | I was charged twice for the same service. | Billing |
| 9. | How do I reset my password? | Technical Support |
| 10. | This is the best experience I’ve had with a tech company. Kudos to you all! | Feedback |

TASK-2 : Zero-Shot Prompting

PROMPT

#“Classify the following email into one of the following categories: Billing, Technical Support, Feedback, Others. Email: ‘I have not received my invoice for last month.’”

* Classify the following email into one of the following categories: Billing, Technical Support, Feedback, Others.
* Email: "I’m getting an error when I try to log into my account."

Response :

* Category: Technical Support

TASK-3 : One-Shot Prompting..

PROMPT

# Add one labeled example before asking the model to classify a new email

Example:

* Email: "I have not received my invoice for last month."
* Category: Billing

Now classify this email:

* Email: "I’m getting an error when I try to log into my account."
* Category: Technical Support

TASK-4 : Few-Shot Prompting..

PROMPT

#Use 3–5 labeled examples in your prompt before asking the model to classify a new email.

Examples:

Email: "I have not received my invoice for last month."

Category: Billing

Email: "My internet connection keeps dropping every few minutes."

Category: Technical Support

Email: "Just wanted to say your support team was incredibly helpful."

Category: Feedback

Email: "What are your support hours during holidays?"

Category: Others

Email: "I was charged twice for the same service."

Category: Billing

Now classify this email:

Email: "I’m getting an error when I try to log into my account."

Category: Technical support

TASK-5 : Evaluation..

PROMPT

# Run all three techniques on the same set of 5 test emails. • Compare and document the accuracy and clarity of responses. Requirements:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Email ID** | **Email Text** | **Actual Category** | **Zero-Shot** | **One-Shot** | **Few-Shot** |
| 4 | Can I change my billing cycle to the 15th of each month? | Billing | Billing | Billing | Billing |
| 6 | Please pass on my thanks to your awesome customer service rep! | Feed | Feed | Feed | Feedback |
| 7 | What are your support hours during holidays? | Others | Others | Others | Others |
| 9 | How do I reset my password? | Technical Support | Technical Support | Technical Support | Technical Support |
| 10 | This is the best experience I’ve had with a tech company. Kudos to you all! | Feedback | Others | Feedback | Feedback |

--> Comparison Table

|  |  |  |
| --- | --- | --- |
| **Technique** | **Accuracy (out of 5)** | **Comments** |
| Zero-Shot | 4/5 | Misclassified emotional feedback as "Others" |
| One-Shot | 5/5 | Slight improvement with one example; correct classification throughout |
| Few-Shot | 5/5 | Most accurate and consistent; context from multiple examples helped |

**--> Reflection..**

**Most Effective Method: Few-Shot Prompting**

**Why:**

* Few-shot prompting provided diverse context and edge cases.
* Helped the LLM better generalize tone-based or less obvious cases (like positive feedback).
* Accuracy was highest and consistent across varied types of emails.

**When to Use Each:**

* **Zero-Shot**: Good for quick classification when low accuracy is acceptable.
* **One-Shot**: Better when slightly better contextual accuracy is needed.
* **Few-Shot**: Best for production use or ambiguous/subjective classification tasks.