

AI ASSISTED CODING

ASSIGNMENT-4.1

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Problem Statement 1

Customer Email Classification

Categories:

- Billing
- Technical Support
- Feedback
- Others

1. Sample Emails

Email	Category
"I was charged twice for my subscription."	Billing
"My app crashes when I open it."	Technical Support
"The new update is very helpful."	Feedback
"Do you have an office in Hyderabad?"	Others
"Please refund my last payment."	Billing

2. Zero-Shot Prompt

Classify the following customer email into one of these categories:

Billing, Technical Support, Feedback, Others.

Email: "My app crashes when I open it."

Output: Technical Support

Comment:

Correct but depends fully on model understanding.

3. One-Shot Prompt

Example:

Email: "I was charged twice for my subscription."

Category: Billing

Now classify the following email:

Email: "Please refund my last payment."

Output: Billing

Comment:

Accuracy improves with one example.

4. Few-Shot Prompt

Example 1:

Email: "I was charged twice for my subscription."

Category: Billing

Example 2:

Email: "My app crashes on startup."

Category: Technical Support

Example 3:

Email: "The service is excellent."

Category: Feedback

Now classify:

Email: "Please refund my last payment."

Output: Billing

Comment:

Most reliable and consistent.

Comparison

Method	Effectiveness
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Zero-shot	Moderate
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One-shot	Better
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Few-shot	Best
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Problem Statement 2

Intent Classification for Chatbot Queries

Intents:

- Account Issue
- Order Status
- Product Inquiry
- General Question

Sample Queries

Query	Intent
"I can't log into my account."	Account Issue
"Where is my order?"	Order Status
"Does this phone support 5G?"	Product Inquiry
"What are your working hours?"	General Question

"My account is locked." Account Issue

"Is this product waterproof?" Product
Inquiry

Zero-Shot Prompt

Classify the following query into:

Account Issue, Order Status, Product Inquiry, General Question.

Query: "Where is my order?"

Output: Order Status

One-Shot Prompt

Example:

Query: "I can't log into my account."

Intent: Account Issue

Now classify:

Query: "My account is locked."

Output: Account Issue

Few-Shot Prompt

Example 1:

Query: "Where is my order?"

Intent: Order Status

Example 2:

Query: "Does this phone support 5G?"

Intent: Product Inquiry

Example 3:

Query: "What are your working hours?"

Intent: General Question

Now classify:

Query: "My account is locked."

Output: Account Issue

Problem Statement 3

Student Feedback Analysis

a) Zero-Shot Prompt

Classify the following feedback as Positive, Negative, or Neutral.

Feedback: "The course content is very helpful."

b) One-Shot Prompt

Example:

Feedback: "The lectures are boring."

Sentiment: Negative

Now classify:

Feedback: "The course content is very helpful."

c) Few-Shot Prompt

Example 1:

Feedback: "The lectures are boring."

Sentiment: Negative

Example 2:

Feedback: "The faculty explains concepts clearly."

Sentiment: Positive

Example 3:

Feedback: "The syllabus is okay."

Sentiment: Neutral

Now classify:

Feedback: "The course content is very helpful."

Output: Positive

d) Explanation

Examples help the model understand tone and sentiment patterns, improving accuracy.

Problem Statement 4

Course Recommendation System

a) Zero-Shot Prompt

Classify the learner query into Beginner, Intermediate, or Advanced.

Query: "I want to learn Python basics."

b) One-Shot Prompt

Example:

Query: "I want to learn Python basics."

Level: Beginner

Now classify:

Query: "I know Python and want to build projects."

c) Few-Shot Prompt

Example 1:

Query: "I want to learn Python basics."

Level: Beginner

Example 2:

Query: "I know Python and want to build projects."

Level: Intermediate

Example 3:

Query: "I want to master machine learning algorithms."

Level: Advanced

Now classify:

Query: "I want advanced deep learning techniques."

Output: Advanced

d) Discussion

Few-shot prompting improves personalized recommendations.

Problem Statement 5

Social Media Post Moderation

a) Zero-Shot Prompt

Classify the following post as Acceptable, Offensive, or Spam.

Post: "Buy now!!! Limited offer!!!"

b) One-Shot Prompt

Example:

Post: "Buy now!!!"

