

Lab Assignment 4.1

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BATCH - 27

Problem Statement 1: Customer Email Classification

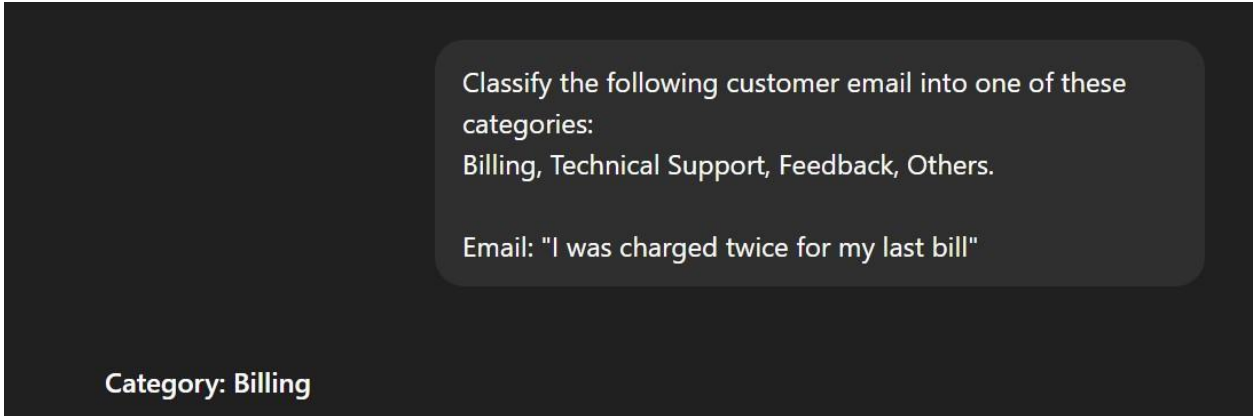
Step 1: Prepare Sample Emails

Email ID	Email Text	Category
E1	I was charged twice for my last bill	Billing
E2	My app is crashing when I log in	Technical Support
E3	The service is very good, keep it up	Feedback
E4	Can you add dark mode feature?	Feedback
E5	Just saying hello	Others

Step 2: Zero-shot Prompt (NO EXAMPLE)

Classify the following customer email into one of these categories: Billing, Technical Support, Feedback, Others.

Email: "I was charged twice for my last bill"



Observation:

The model correctly classified the email without any examples.

Step 3: One-shot Prompt (ONE EXAMPLE):

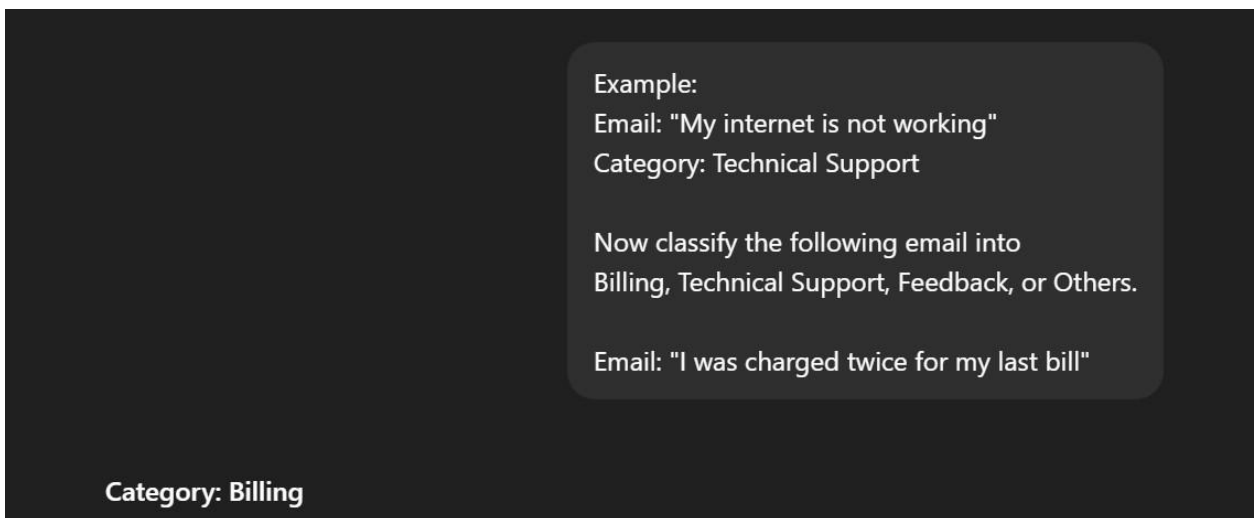
Example:

Email: "My internet is not working"

Category: Technical Support

Now classify the following email into
Billing, Technical Support, Feedback, or Others.

Email: "I was charged twice for my last bill"



Observation:

Providing one example improved clarity.

Step 4: Few-shot Prompt :

Example 1:

Email: "My internet is not working"

Category: Technical Support

Example 2:

Email: "Thank you for great service"

Category: Feedback

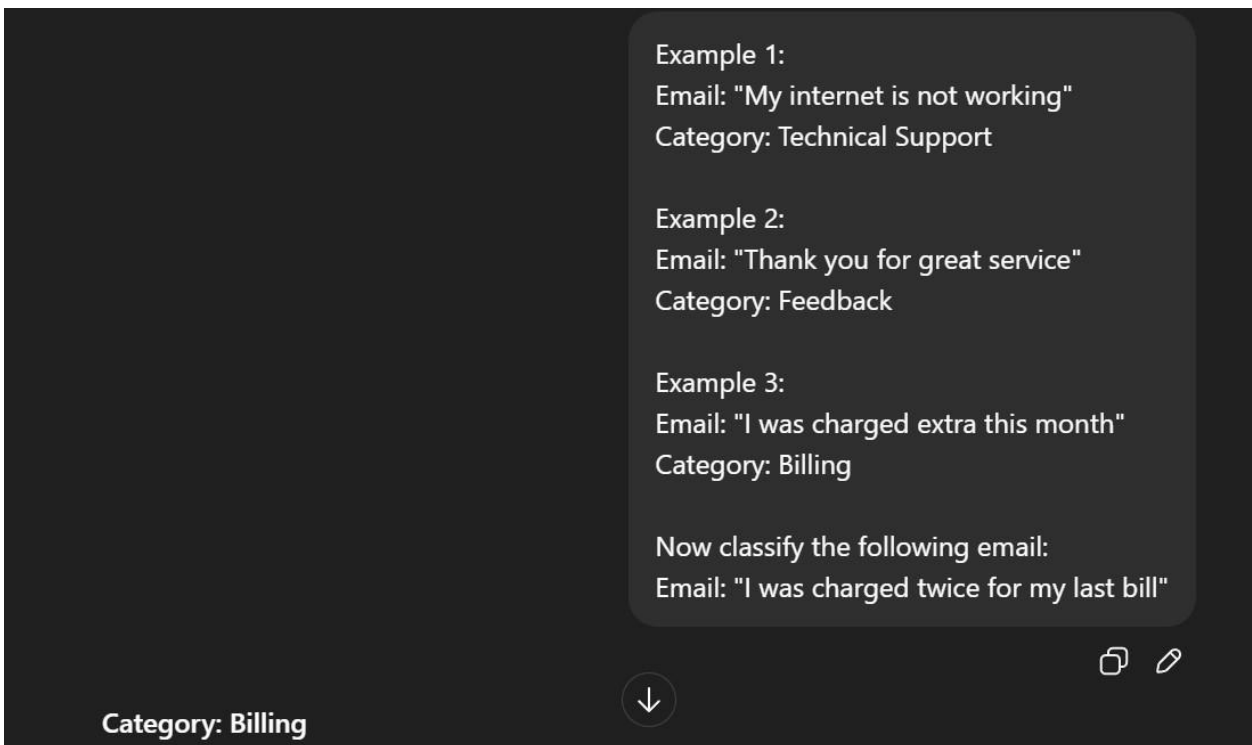
Example 3:

Email: "I was charged extra this month"

Category: Billing

Now classify the following email:

Email: "I was charged twice for my last bill"



Observation:

Few-shot prompting gave the most confident and accurate output.

Problem Statement 2: Intent Classification for Chatbot Queries

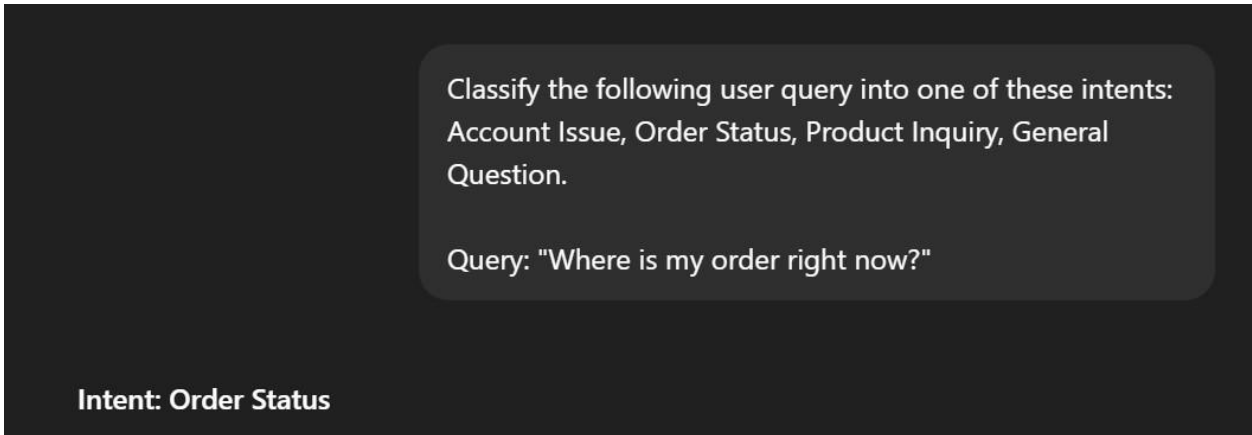
Query ID	User Query	Intent
Q1	I forgot my account password	Account Issue
Q2	Where is my order right now?	Order Status
Q3	Does this laptop support Windows 11?	Product Inquiry
Q4	How can I contact customer care?	General Question
Q5	My account is locked	Account Issue
Q6	When will my product be delivered?	Order Status

2. Zero-shot Prompting

Prompt:

Classify the following user query into one of these intents:
Account Issue, Order Status, Product Inquiry, General Question.

Query: "Where is my order right now?"



3. One-shot Prompting

Prompt:

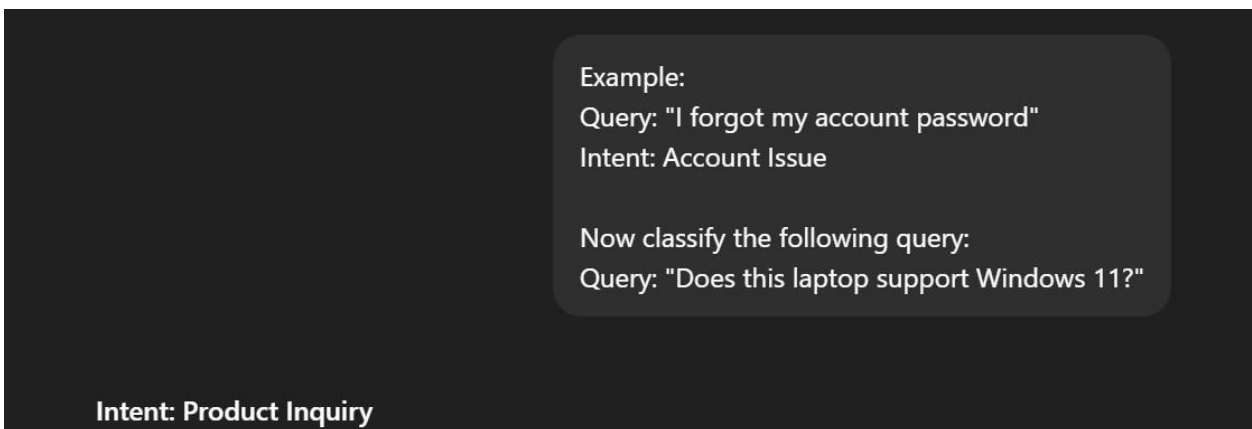
Example:

Query: "I forgot my account password"

Intent: Account Issue

Now classify the following query:

Query: "Does this laptop support Windows 11?"



4. Few-shot Prompting

Prompt:

Example 1:

Query: "My account is locked"

Intent: Account Issue

Example 2:

Query: "When will my order arrive?"

Intent: Order Status

Example 3:

Query: "Does this phone support 5G?"

Intent: Product Inquiry

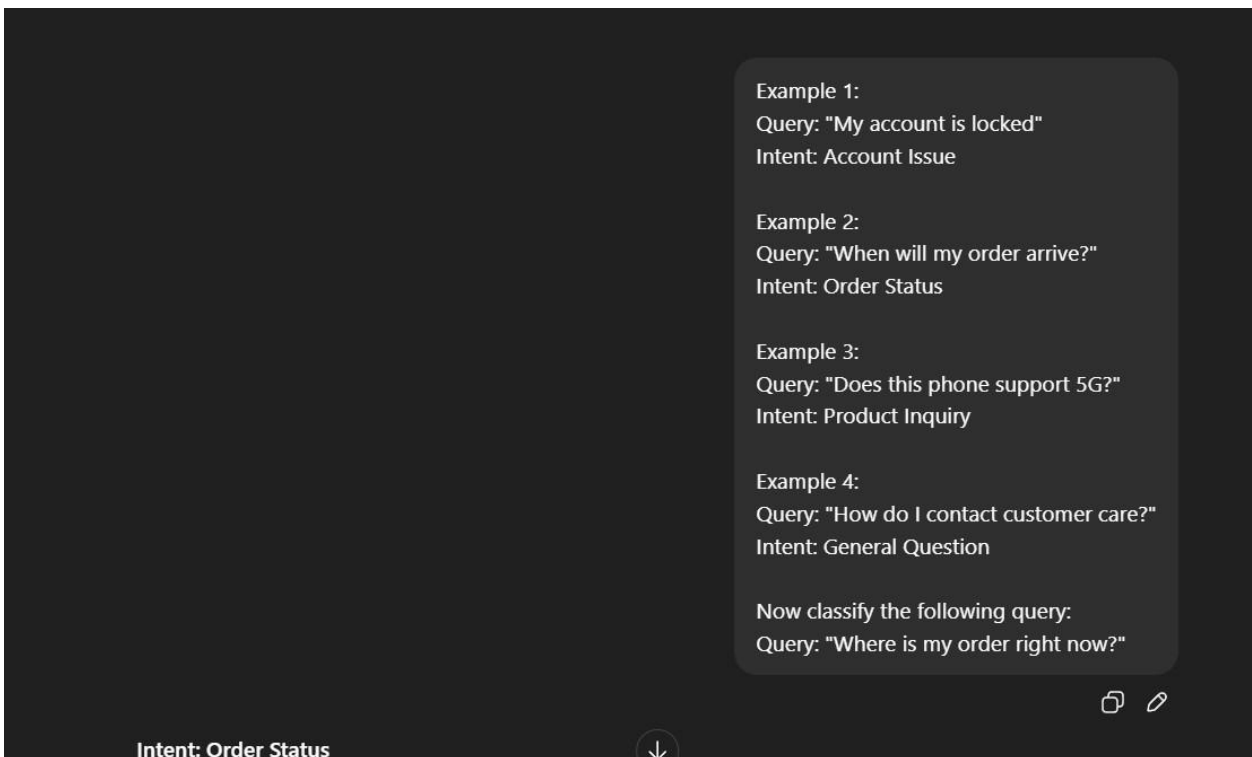
Example 4:

Query: "How do I contact customer care?"

Intent: General Question

Now classify the following query:

Query: "Where is my order right now?"



Observation:

Zero-shot works but may be slightly inconsistent.

One-shot improves understanding of intent categories.

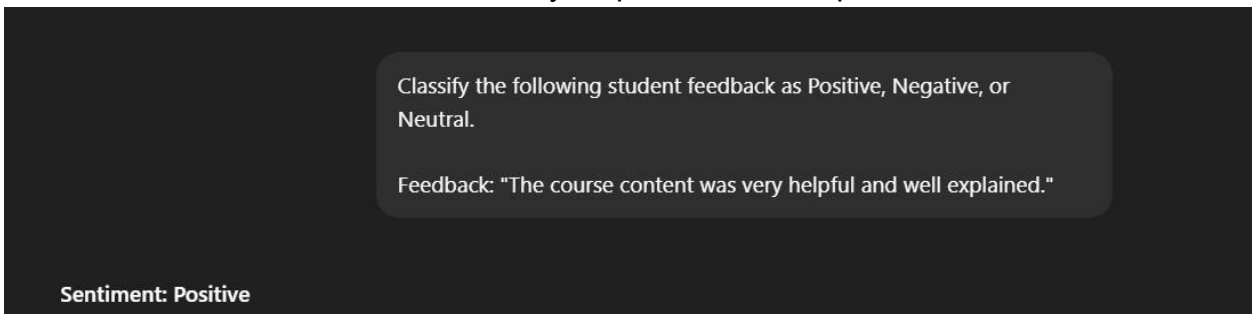
Few-shot gives the most accurate and confident results.

Problem Statement 3: Student Feedback Analysis

a) Zero-shot Prompt

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

Feedback: "The course content was very helpful and well explained."



b) One-shot Prompt

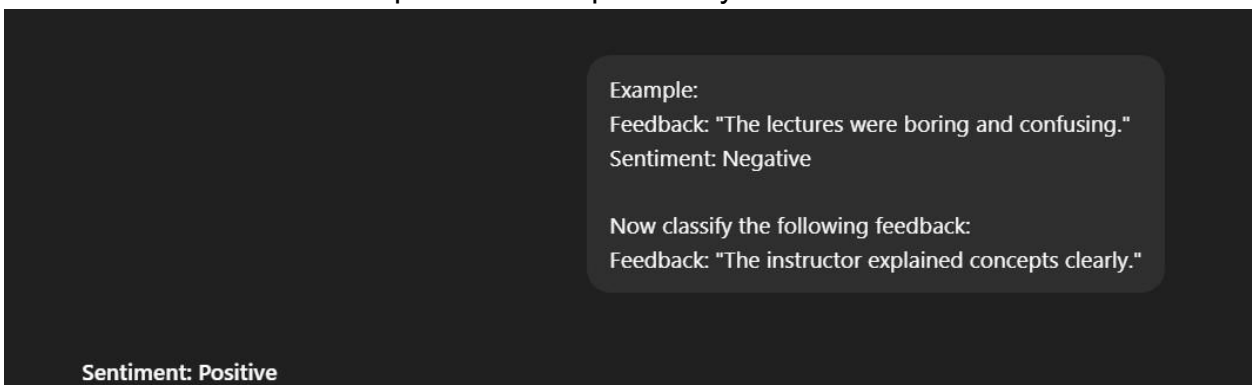
Example:

Feedback: "The lectures were boring and confusing."

Sentiment: Negative

Now classify the following feedback:

Feedback: "The instructor explained concepts clearly."



c) Few-shot Prompt

Example 1:

Feedback: "The classes were engaging and informative."

Sentiment: Positive

Example 2:

Feedback: "The syllabus is okay but needs improvement."

Sentiment: Neutral

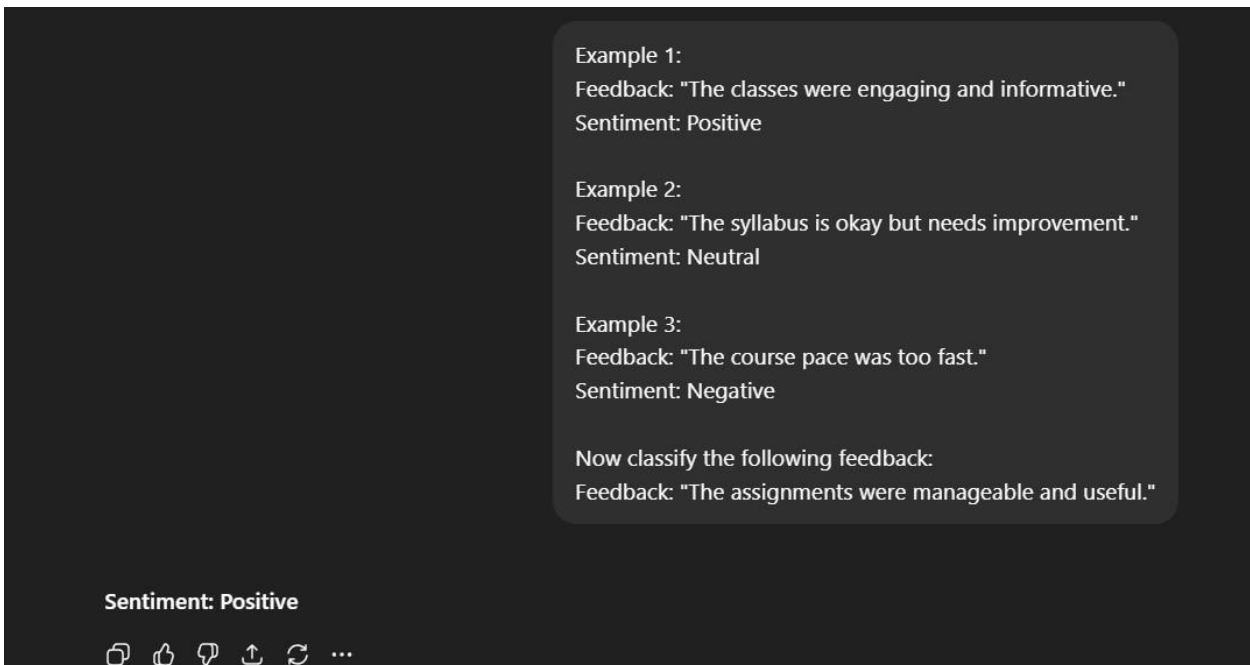
Example 3:

Feedback: "The course pace was too fast."

Sentiment: Negative

Now classify the following feedback:

Feedback: "The assignments were manageable and useful."



Observation:

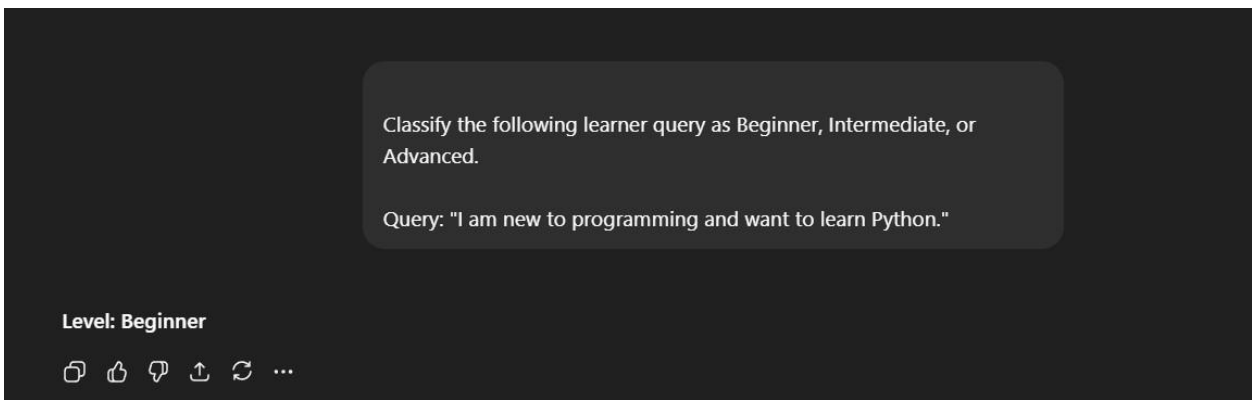
Providing examples helps the model better understand tone and context, leading to more accurate sentiment classification.

Problem Statement 4: Course Recommendation System

a) Zero-shot Prompt

Classify the following learner query as Beginner, Intermediate, or Advanced.

Query: "I am new to programming and want to learn Python."



b) One-shot Prompt

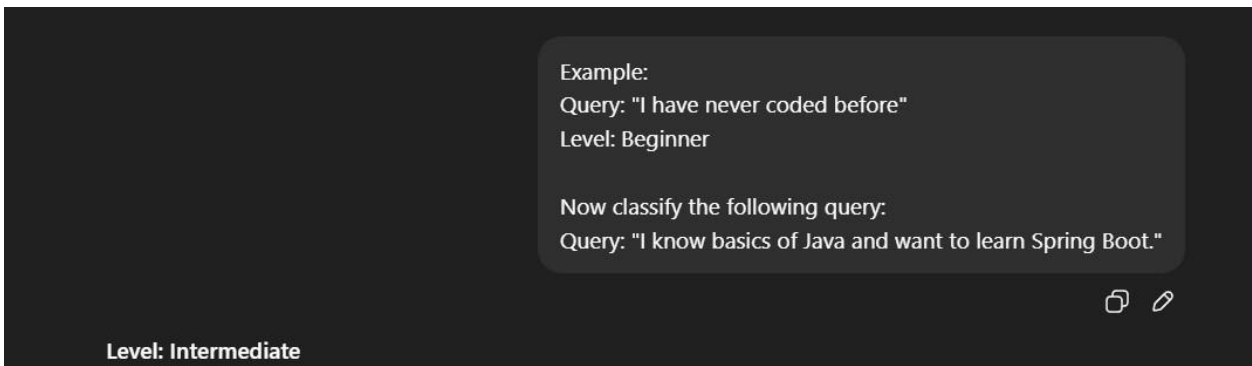
Example:

Query: "I have never coded before"

Level: Beginner

Now classify the following query:

Query: "I know basics of Java and want to learn Spring Boot."



c) Few-shot Prompt

Example 1:

Query: "I am new to programming"

Level: Beginner

Example 2:

Query: "I understand OOP concepts"

Level: Intermediate

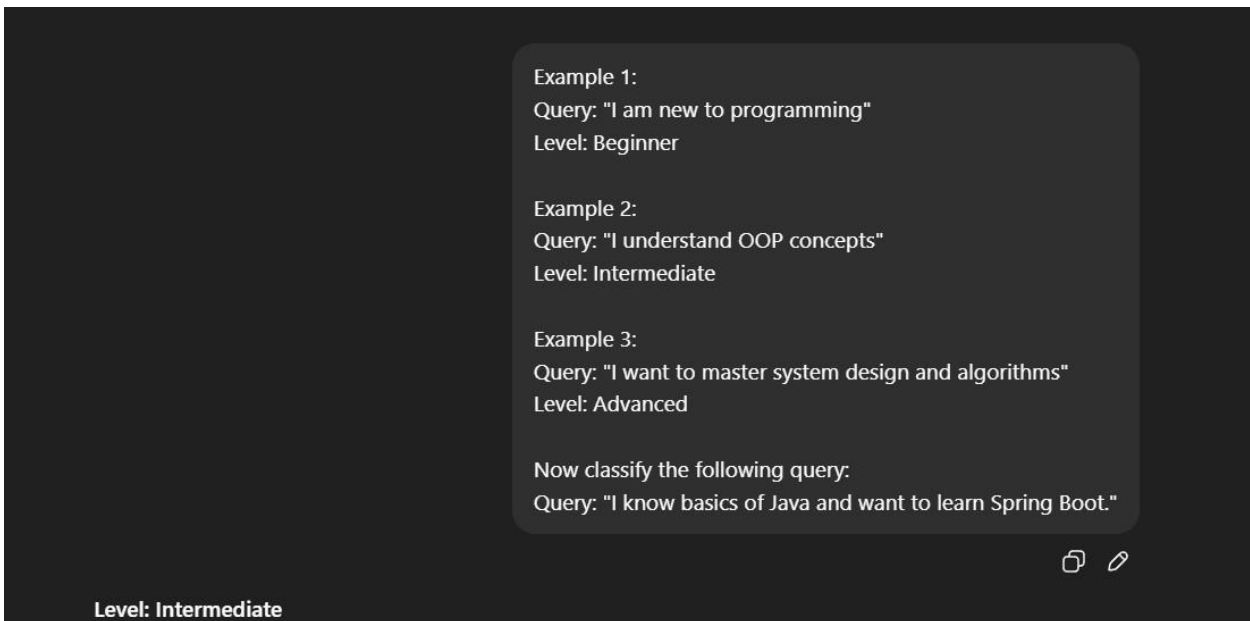
Example 3:

Query: "I want to master system design and algorithms"

Level: Advanced

Now classify the following query:

Query: "I know basics of Java and want to learn Spring Boot."



d) Discussion

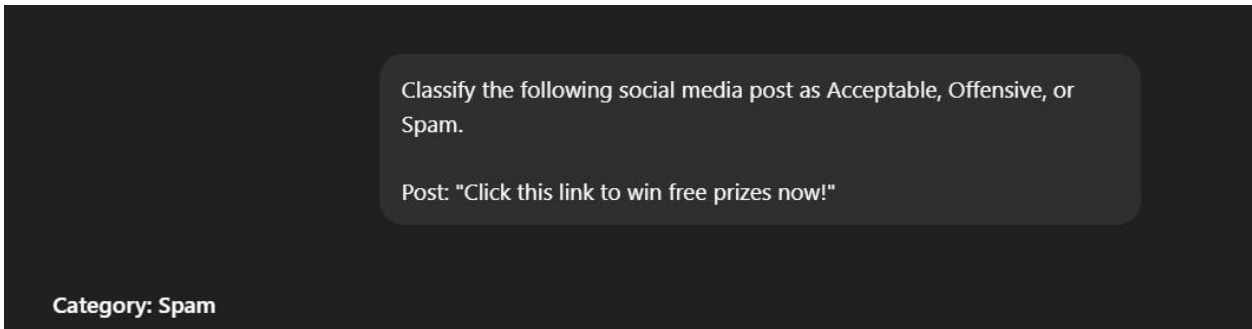
Few-shot prompting improves recommendation quality by giving clearer boundaries between skill levels.

Problem Statement 5: Social Media Post Moderation

a) Zero-shot Prompt

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

Post: "Click this link to win free prizes now!"



b) One-shot Prompt

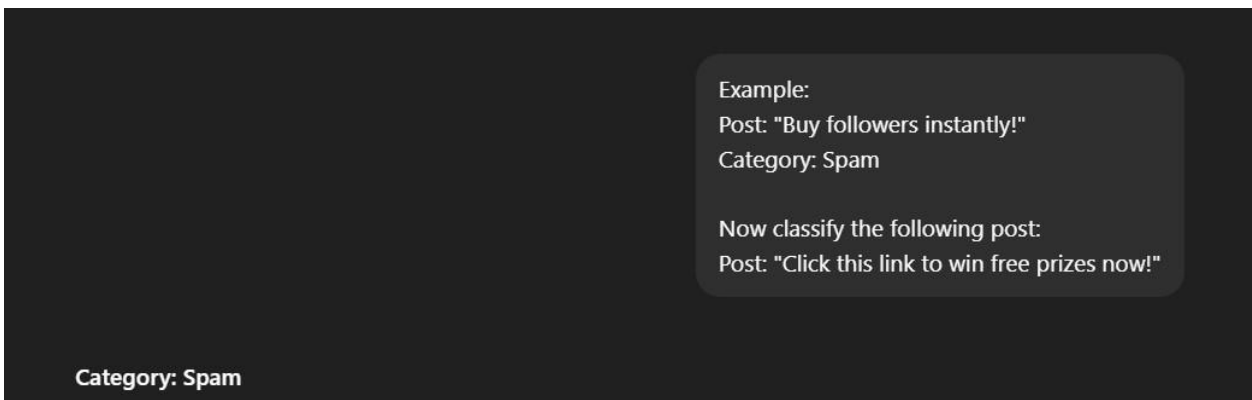
Example:

Post: "Buy followers instantly!"

Category: Spam

Now classify the following post:

Post: "Click this link to win free prizes now!"



c) Few-shot Prompt

Example 1:

Post: "This product is amazing!"

Category: Acceptable

Example 2:

Post: "You are useless and stupid"

Category: Offensive

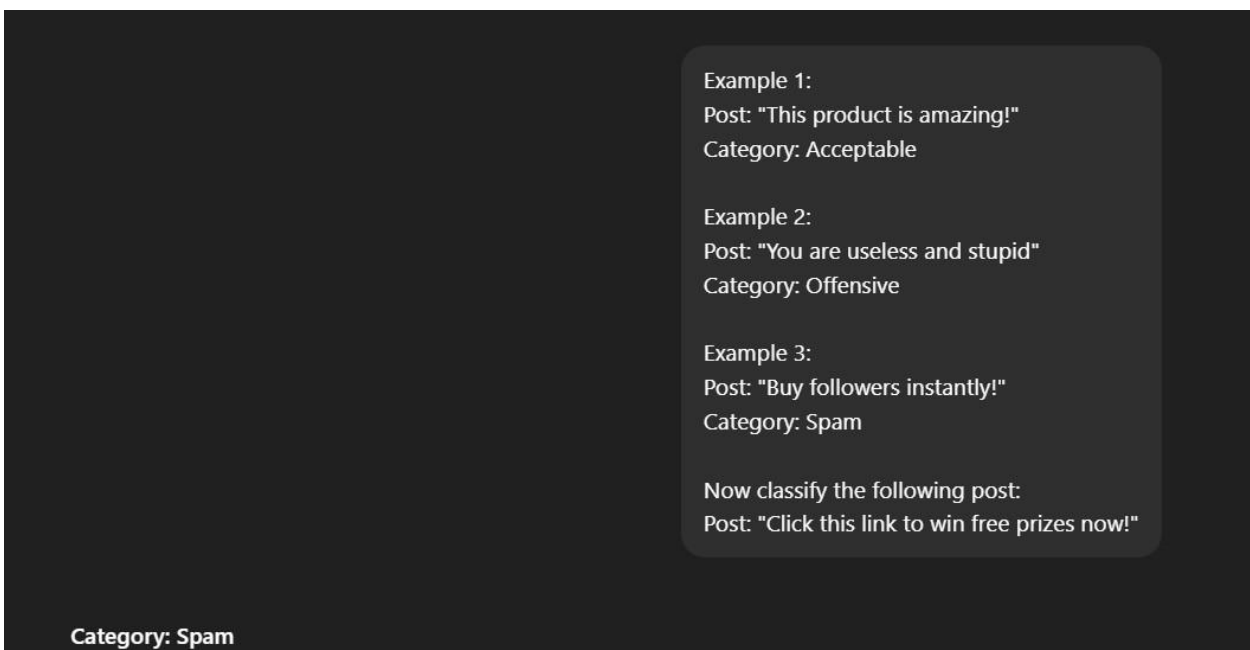
Example 3:

Post: "Buy followers instantly!"

Category: Spam

Now classify the following post:

Post: "Click this link to win free prizes now!"



d) Explanation

Zero-shot prompting can struggle with slang, sarcasm, or hidden spam, whereas examples help the model understand subtle patterns.