School of Computer Science and Artificial Intelligence

Lab Assignment -4.5

Program :B. Tech (CSE)

Specialization :AIML

Course Title : AI ASSISTED CODING

Course Code : 23CS002PC304

Semester : VI

Academic Session : 2025-2026

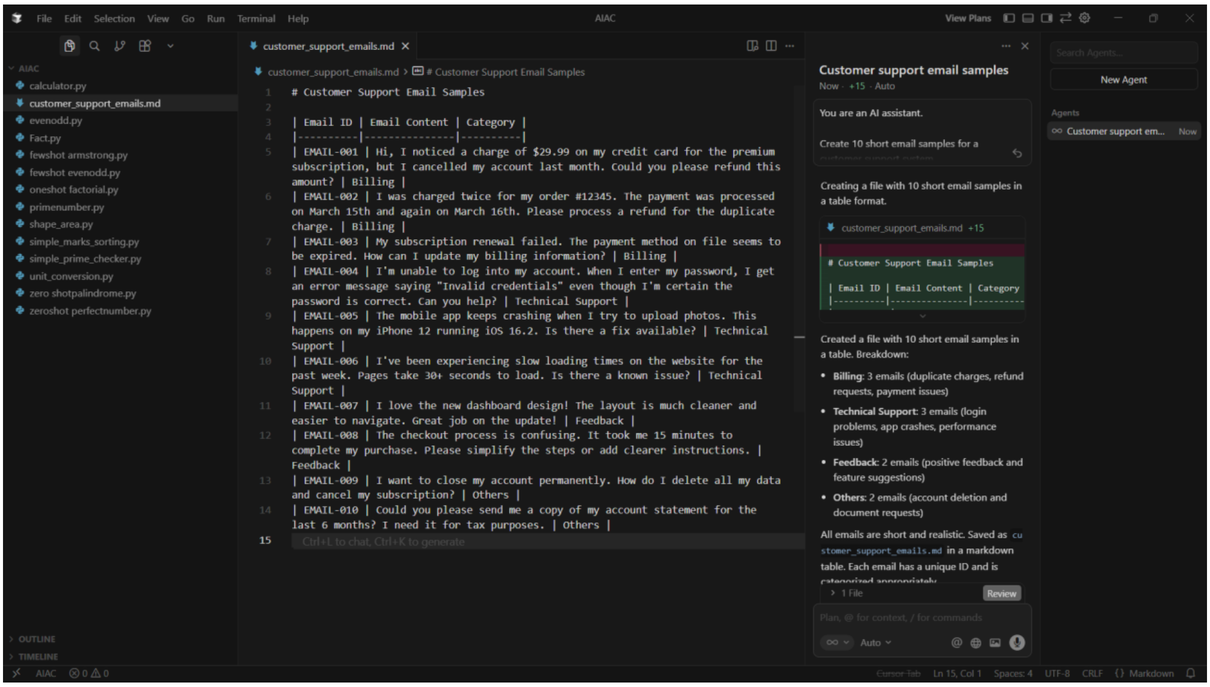
Name of Student : PASHIKANTI KARTHISHA

Enrollment No. : 2303A52099

Batch No. : 33

a. Prepare Sample Data:

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



```
# Customer Support Email Samples

| Email ID | Email Content | Category |
|----------|---------------|----------|
| EMAIL-001 | Hi, I noticed a charge of $29.99 on my credit card for the premium subscription, but I cancelled my account last month. Could you please refund this amount? | Billing |
| EMAIL-002 | I was charged twice for my order #12345. The payment was processed on March 15th and again on March 16th. Please process a refund for the duplicate charge. | Billing |
| EMAIL-003 | My subscription renewal failed. The payment method on file seems to be expired. How can I update my billing information? | Billing |
| EMAIL-004 | I'm unable to log into my account. When I enter my password, I get an error message saying "Invalid credentials" even though I'm certain the password is correct. Can you help? | Technical Support |
| EMAIL-005 | The mobile app keeps crashing when I try to upload photos. This happens on my iPhone 12 running iOS 16.2. Is there a fix available? | Technical Support |
| EMAIL-006 | I've been experiencing slow loading times on the website for the past week. Pages take 30+ seconds to load. Is there a known issue? | Technical Support |
| EMAIL-007 | I love the new dashboard design! The layout is much cleaner and easier to navigate. Great job on the update! | Feedback |
| EMAIL-008 | The checkout process is confusing. It took me 15 minutes to complete my purchase. Please simplify the steps or add clearer instructions. | Feedback |
| EMAIL-009 | I want to close my account permanently. How do I delete all my data and cancel my subscription? | Others |
| EMAIL-010 | Could you please send me a copy of my account statement for the last 6 months? I need it for tax purposes. | Others |
```

Customer support email samples

Now · +15 · Auto

You are an AI assistant.

Create 10 short email samples for a customer support system

Creating a file with 10 short email samples in a table format.

customer_support_emails.md +15

```
# Customer Support Email Samples

| Email ID | Email Content | Category
|----------|---------------|----------
```

Created a file with 10 short email samples in a table. Breakdown:

- **Billing**: 3 emails (duplicate charges, refund requests, payment issues)
- **Technical Support**: 3 emails (login problems, app crashes, performance issues)
- **Feedback**: 2 emails (positive feedback and feature suggestions)
- **Others**: 2 emails (account deletion and document requests)

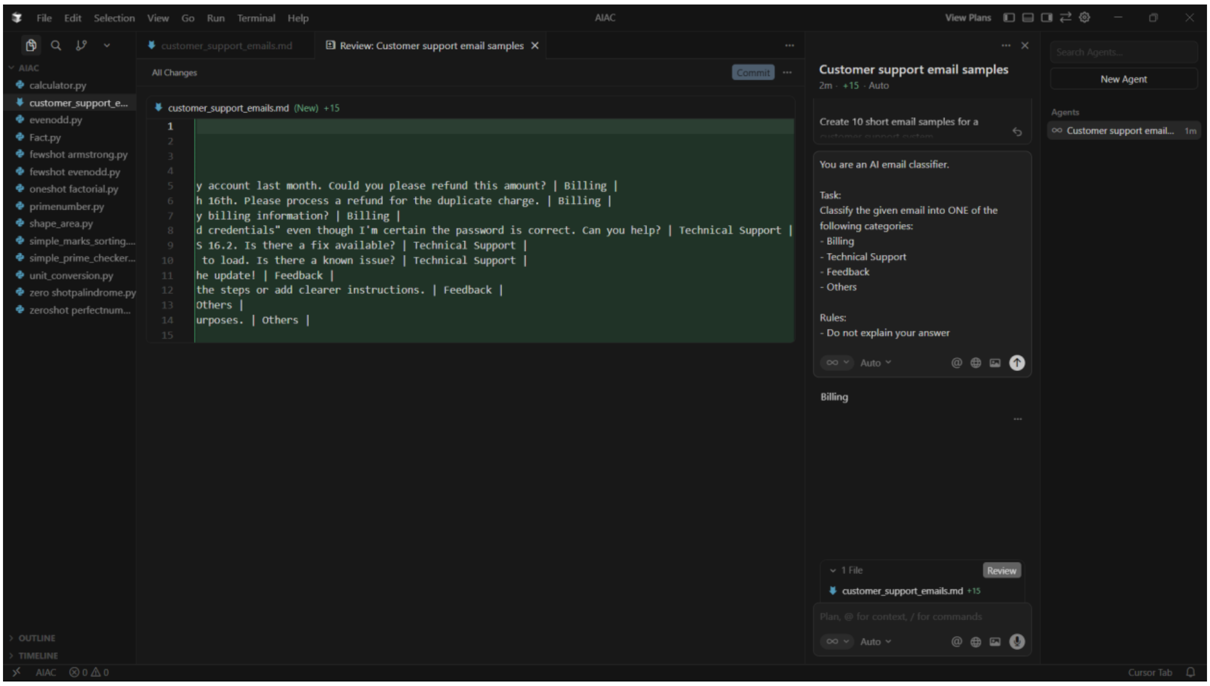
All emails are short and realistic. Saved as `customer_support_emails.md` in a markdown table. Each email has a unique ID and is categorized appropriately

b. Zero-shot Prompting:

• Design a prompt that asks the LLM to classify a single email without providing any examples.

- Example 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.'"



customer_support_emails.md (New) +15

```
y account last month. Could you please refund this amount? | Billing |
h 16th. Please process a refund for the duplicate charge. | Billing |
y billing information? | Billing |
d credentials" even though I'm certain the password is correct. Can you help? | Technical Support |
S 16.2. Is there a fix available? | Technical Support |
 to load. Is there a known issue? | Technical Support |
he update! | Feedback |
the steps or add clearer instructions. | Feedback |
Others |
urposes. | Others |
```

Customer support email samples
2m · +15 · Auto

Create 10 short email samples for a customer support system

You are an AI email classifier.

Task:
Classify the given email into ONE of the following categories:
- Billing
- Technical Support
- Feedback
- Others

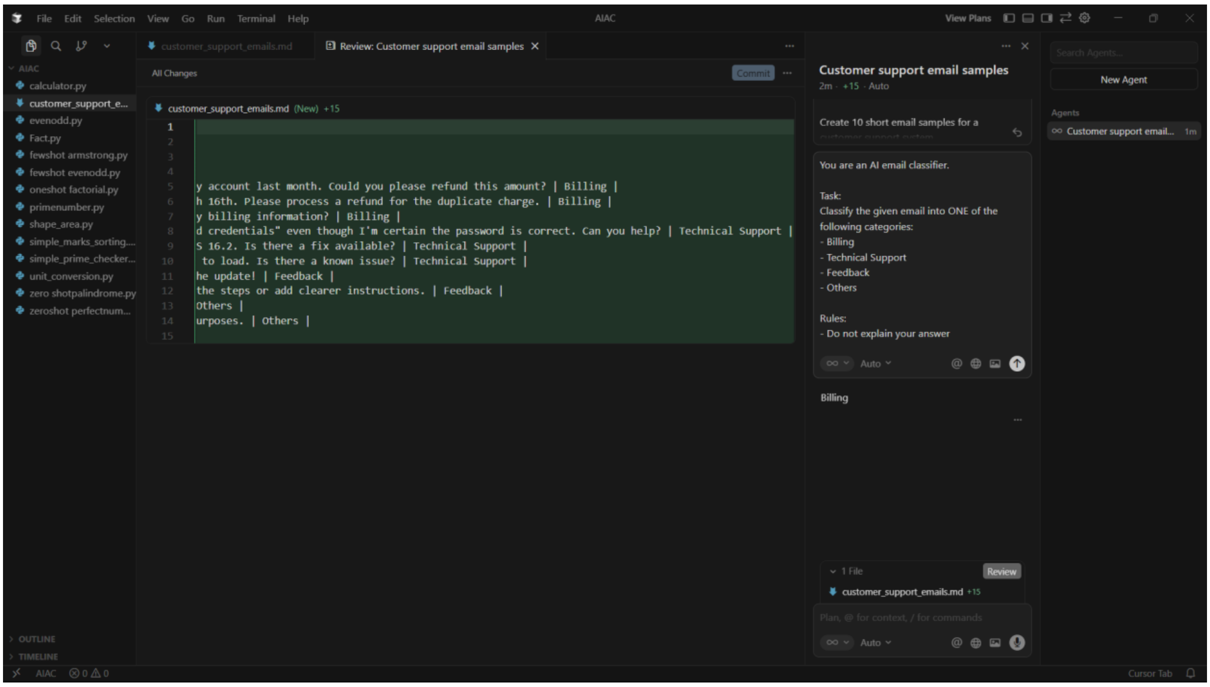
Rules:
- Do not explain your answer

Billing

customer_support_emails.md +15

c. One-shot Prompting:

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


customer_support_emails.md (New) +15

```
y account last month. Could you please refund this amount? | Billing |
h 16th. Please process a refund for the duplicate charge. | Billing |
y billing information? | Billing |
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Others |
urposes. | Others |
```

Customer support email samples
2m · +15 · Auto

Create 10 short email samples for a customer support system

You are an AI email classifier.

Task:
Classify the given email into ONE of the following categories:
- Billing
- Technical Support
- Feedback
- Others

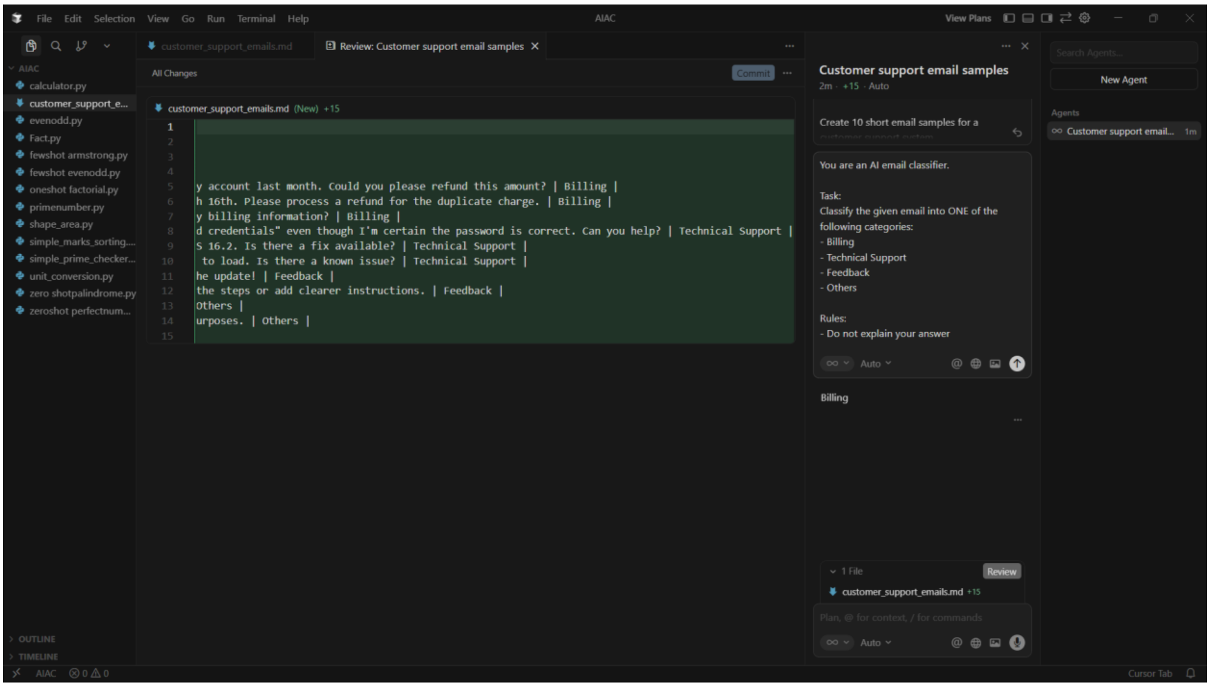
Rules:
- Do not explain your answer

Billing

customer_support_emails.md +15

d. Few-shot Prompting:

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



```
y account last month. Could you please refund this amount? | Billing |
h 16th. Please process a refund for the duplicate charge. | Billing |
y billing information? | Billing |
d credentials" even though I'm certain the password is correct. Can you help? | Technical Support |
S 16.2. Is there a fix available? | Technical Support |
 to load. Is there a known issue? | Technical Support |
he update! | Feedback |
the steps or add clearer instructions. | Feedback |
Others |
urposes. | Others |
```

Customer support email samples

2m · +15 · Auto

Create 10 short email samples for a customer support system

You are an AI email classifier.

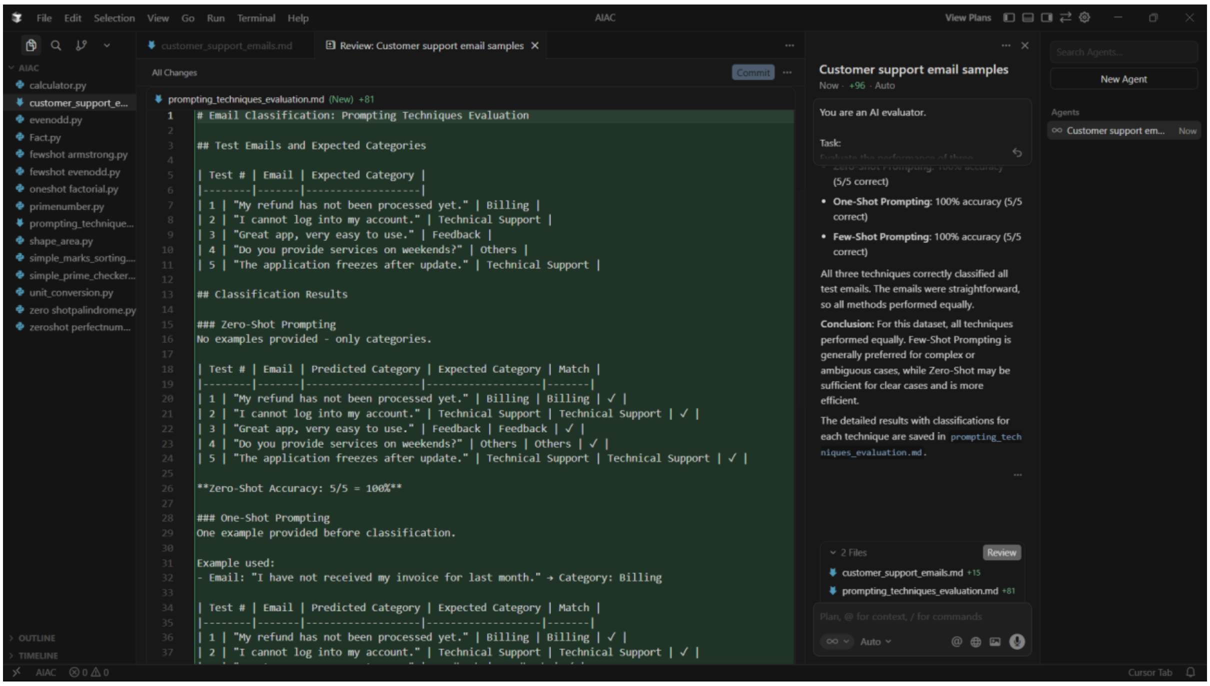
Task:
Classify the given email into ONE of the following categories:
- Billing
- Technical Support
- Feedback
- Others

Rules:
- Do not explain your answer

Billing

e. Evaluation:

- Run all three techniques on the same set of 5 test emails.
- Compare and document the accuracy and clarity of responses.



```
# Email Classification: Prompting Techniques Evaluation

## Test Emails and Expected Categories

| Test # | Email | Expected Category |
|--------|-------|-------------------|
| 1 | "My refund has not been processed yet." | Billing |
| 2 | "I cannot log into my account." | Technical Support |
| 3 | "Great app, very easy to use." | Feedback |
| 4 | "Do you provide services on weekends?" | Others |
| 5 | "The application freezes after update." | Technical Support |

## Classification Results

### Zero-Shot Prompting
No examples provided - only categories.

| Test # | Email | Predicted Category | Expected Category | Match |
|--------|-------|-------------------|-------------------|-------|
| 1 | "My refund has not been processed yet." | Billing | Billing | ✓ |
| 2 | "I cannot log into my account." | Technical Support | Technical Support | ✓ |
| 3 | "Great app, very easy to use." | Feedback | Feedback | ✓ |
| 4 | "Do you provide services on weekends?" | Others | Others | ✓ |
| 5 | "The application freezes after update." | Technical Support | Technical Support | ✓ |

**Zero-Shot Accuracy: 5/5 = 100%**

### One-Shot Prompting
One example provided before classification.

Example used:
- Email: "I have not received my invoice for last month." → Category: Billing

| Test # | Email | Predicted Category | Expected Category | Match |
|--------|-------|-------------------|-------------------|-------|
| 1 | "My refund has not been processed yet." | Billing | Billing | ✓ |
| 2 | "I cannot log into my account." | Technical Support | Technical Support | ✓ |
```

Customer support email samples

Now · +96 · Auto

You are an AI evaluator.

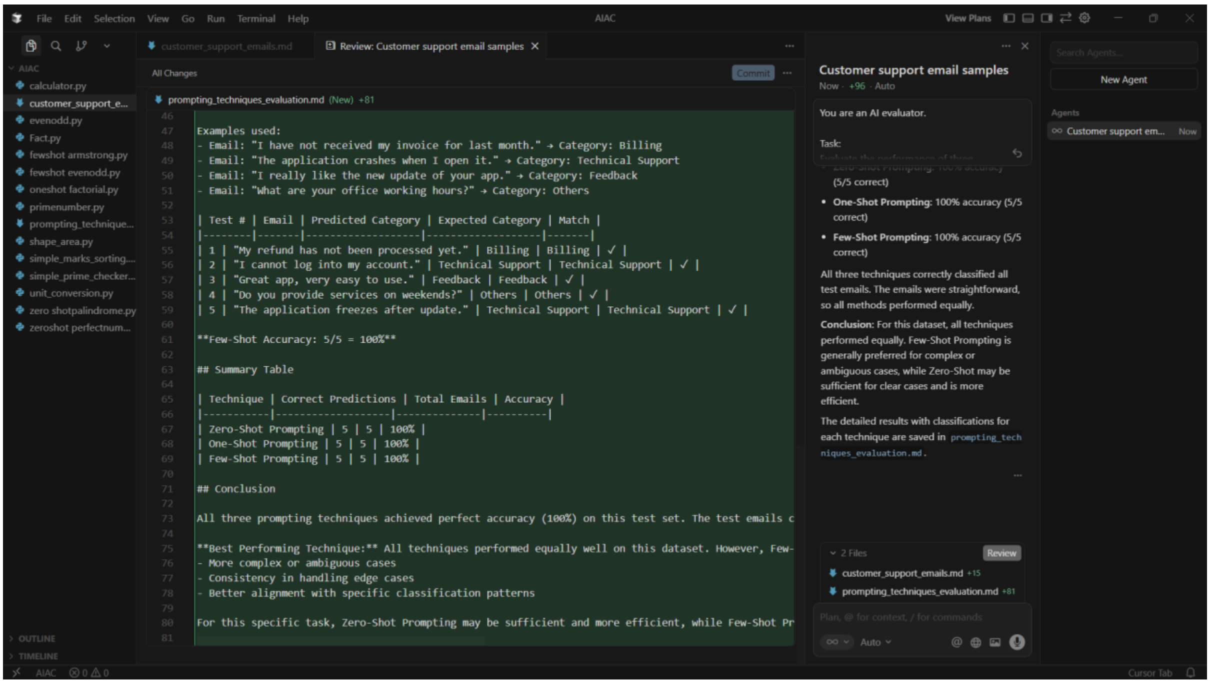
Task:
Evaluate the performance of three

- Zero-Shot Prompting: 100% accuracy (5/5 correct)
- **One-Shot Prompting:** 100% accuracy (5/5 correct)
- **Few-Shot Prompting:** 100% accuracy (5/5 correct)

All three techniques correctly classified all test emails. The emails were straightforward, so all methods performed equally.

Conclusion: For this dataset, all techniques performed equally. Few-Shot Prompting is generally preferred for complex or ambiguous cases, while Zero-Shot may be sufficient for clear cases and is more efficient.

The detailed results with classifications for each technique are saved in `prompting_techniques_evaluation.md`.



```
Examples used:
- Email: "I have not received my invoice for last month." → Category: Billing
- Email: "The application crashes when I open it." → Category: Technical Support
- Email: "I really like the new update of your app." → Category: Feedback
- Email: "What are your office working hours?" → Category: Others

| Test # | Email | Predicted Category | Expected Category | Match |
|--------|-------|-------------------|-------------------|-------|
| 1 | "My refund has not been processed yet." | Billing | Billing | ✓ |
| 2 | "I cannot log into my account." | Technical Support | Technical Support | ✓ |
| 3 | "Great app, very easy to use." | Feedback | Feedback | ✓ |
| 4 | "Do you provide services on weekends?" | Others | Others | ✓ |
| 5 | "The application freezes after update." | Technical Support | Technical Support | ✓ |

**Few-Shot Accuracy: 5/5 = 100%**

## Summary Table

| Technique | Correct Predictions | Total Emails | Accuracy |
|-----------|-------------------|--------------|----------|
| Zero-Shot Prompting | 5 | 5 | 100% |
| One-Shot Prompting | 5 | 5 | 100% |
| Few-Shot Prompting | 5 | 5 | 100% |

## Conclusion

All three prompting techniques achieved perfect accuracy (100%) on this test set. The test emails c

**Best Performing Technique:** All techniques performed equally well on this dataset. However, Few-
- More complex or ambiguous cases
- Consistency in handling edge cases
- Better alignment with specific classification patterns

For this specific task, Zero-Shot Prompting may be sufficient and more efficient, while Few-Shot Pr
```

Customer support email samples

Now · +96 · Auto

You are an AI evaluator.

Task:

Evaluate the performance of three

- Zero-Shot Prompting: 100% accuracy (5/5 correct)
- **One-Shot Prompting**: 100% accuracy (5/5 correct)
- **Few-Shot Prompting**: 100% accuracy (5/5 correct)

All three techniques correctly classified all test emails. The emails were straightforward, so all methods performed equally.

Conclusion: For this dataset, all techniques performed equally. Few-Shot Prompting is generally preferred for complex or ambiguous cases, while Zero-Shot may be sufficient for clear cases and is more efficient.

The detailed results with classifications for each technique are saved in `prompting_techniques_evaluation.md`.

2 Files Review

customer_support_emails.md +15

prompting_techniques_evaluation.md +81

Plan, @ for context, / for commands

Auto

2. Travel Query Classification

Scenario:

A travel assistant must classify queries into Flight Booking, Hotel

Booking, Cancellation, or General Travel Info.

Tasks:

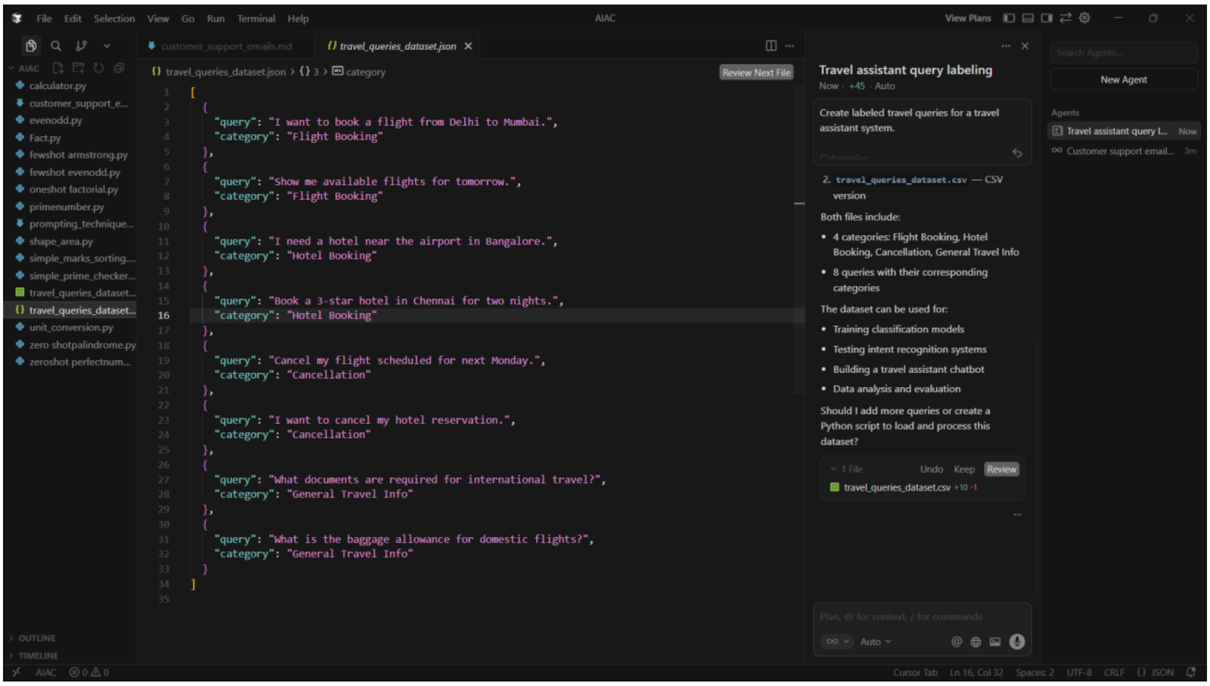
a. Prepare labeled travel queries.

b. Apply Zero-shot prompting.

c. Apply One-shot prompting.

d. Apply Few-shot prompting.

e. Compare response consistency.



```json
[
  {
    "query": "I want to book a flight from Delhi to Mumbai.",
    "category": "Flight Booking"
  },
  {
    "query": "Show me available flights for tomorrow.",
    "category": "Flight Booking"
  },
  {
    "query": "I need a hotel near the airport in Bangalore.",
    "category": "Hotel Booking"
  },
  {
    "query": "Book a 3-star hotel in Chennai for two nights.",
    "category": "Hotel Booking"
  },
  {
    "query": "Cancel my flight scheduled for next Monday.",
    "category": "Cancellation"
  },
  {
    "query": "I want to cancel my hotel reservation.",
    "category": "Cancellation"
  },
  {
    "query": "What documents are required for international travel?",
    "category": "General Travel Info"
  },
  {
    "query": "What is the baggage allowance for domestic flights?",
    "category": "General Travel Info"
  }
]
```

Travel assistant query labeling

Now · +45 · Auto

Create labeled travel queries for a travel assistant system.

2. `travel_queries_dataset.csv` — CSV version

Both files include:

- 4 categories: Flight Booking, Hotel Booking, Cancellation, General Travel Info
- 8 queries with their corresponding categories

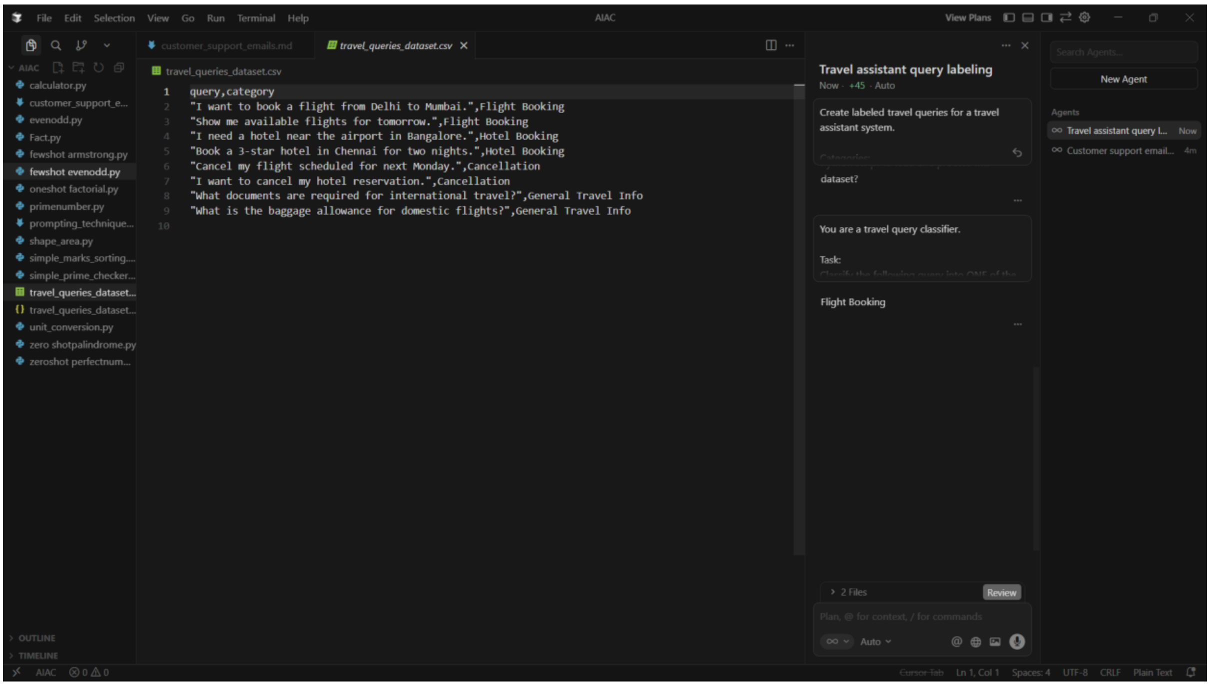
The dataset can be used for:

- Training classification models
- Testing intent recognition systems
- Building a travel assistant chatbot
- Data analysis and evaluation

Should I add more queries or create a Python script to load and process this dataset?

1 File Undo Keep Review

travel_queries_dataset.csv +10 -1



```
query,category
"I want to book a flight from Delhi to Mumbai.",Flight Booking
"Show me available flights for tomorrow.",Flight Booking
"I need a hotel near the airport in Bangalore.",Hotel Booking
"Book a 3-star hotel in Chennai for two nights.",Hotel Booking
"Cancel my flight scheduled for next Monday.",Cancellation
"I want to cancel my hotel reservation.",Cancellation
"What documents are required for international travel?",General Travel Info
"What is the baggage allowance for domestic flights?",General Travel Info
```

Travel assistant query labeling

Now · +45 · Auto

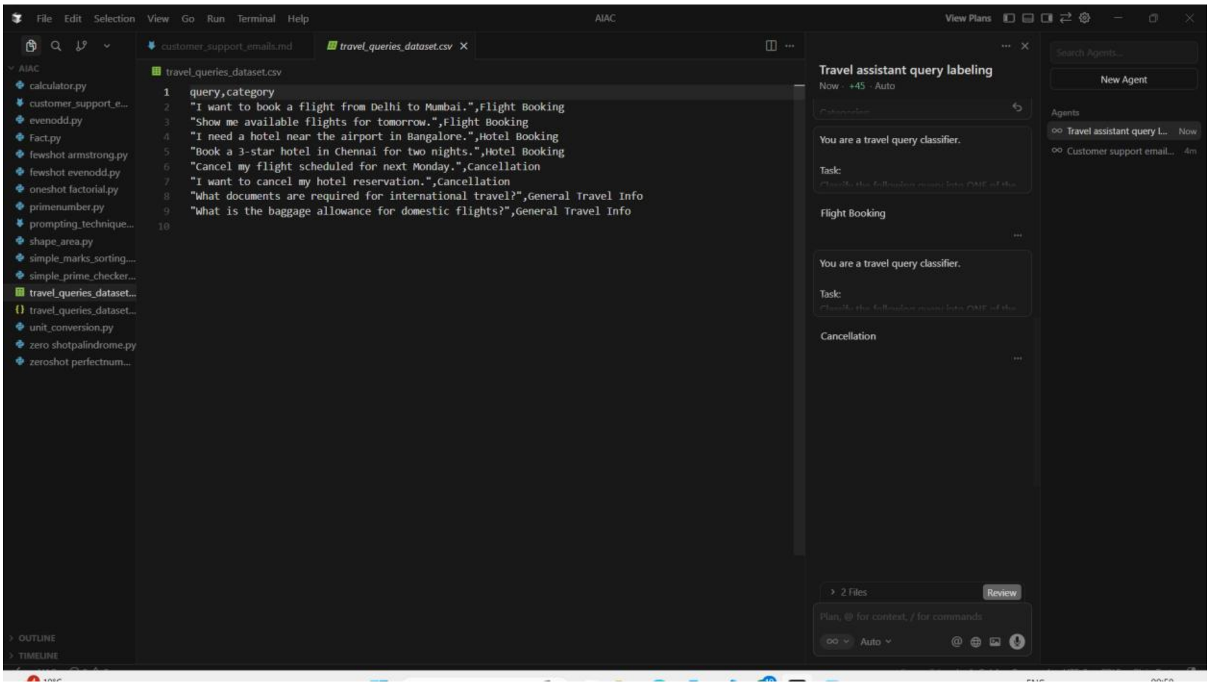
Create labeled travel queries for a travel assistant system.

dataset?

You are a travel query classifier.

Task:

Flight Booking



travel_queries_dataset.csv

```
query,category
"I want to book a flight from Delhi to Mumbai.",Flight Booking
"Show me available flights for tomorrow.",Flight Booking
"I need a hotel near the airport in Bangalore.",Hotel Booking
"Book a 3-star hotel in Chennai for two nights.",Hotel Booking
"Cancel my flight scheduled for next Monday.",Cancellation
"I want to cancel my hotel reservation.",Cancellation
"What documents are required for international travel?",General Travel Info
"What is the baggage allowance for domestic flights?",General Travel Info
```

Travel assistant query labeling

Now · +45 · Auto

You are a travel query classifier.

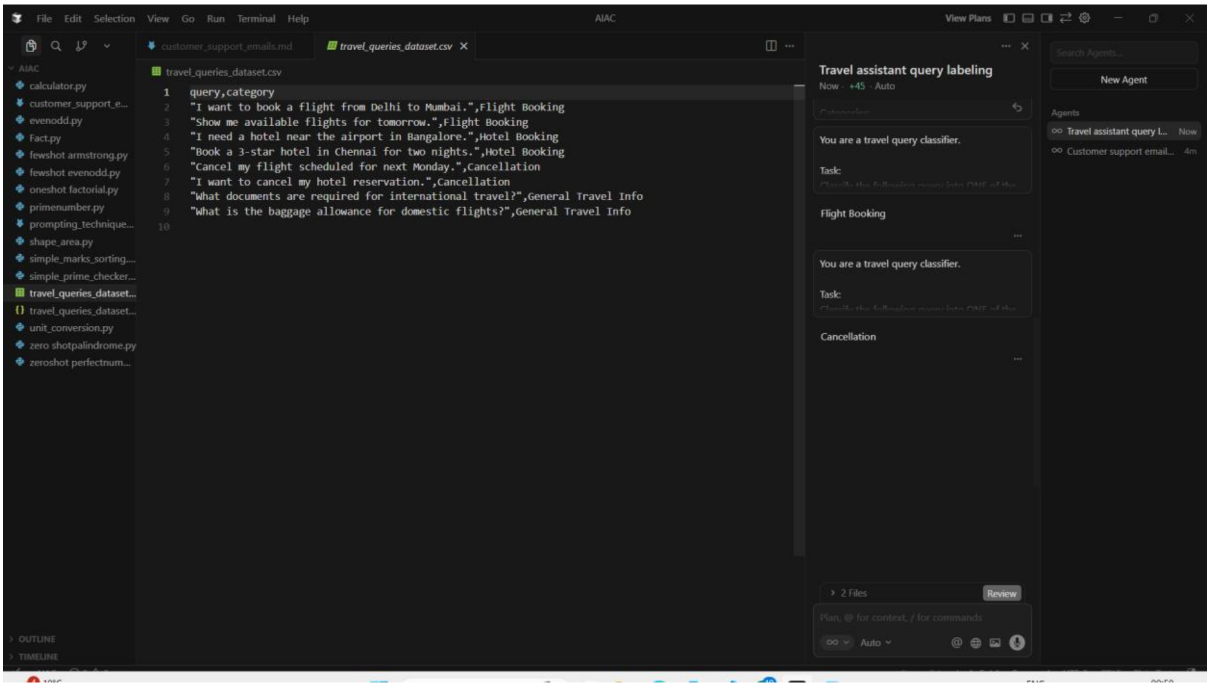
Task:

Flight Booking

You are a travel query classifier.

Task:

Cancellation


travel_queries_dataset.csv

```
query,category
"I want to book a flight from Delhi to Mumbai.",Flight Booking
"Show me available flights for tomorrow.",Flight Booking
"I need a hotel near the airport in Bangalore.",Hotel Booking
"Book a 3-star hotel in Chennai for two nights.",Hotel Booking
"Cancel my flight scheduled for next Monday.",Cancellation
"I want to cancel my hotel reservation.",Cancellation
"What documents are required for international travel?",General Travel Info
"What is the baggage allowance for domestic flights?",General Travel Info
```

Travel assistant query labeling

Now · +45 · Auto

You are a travel query classifier.

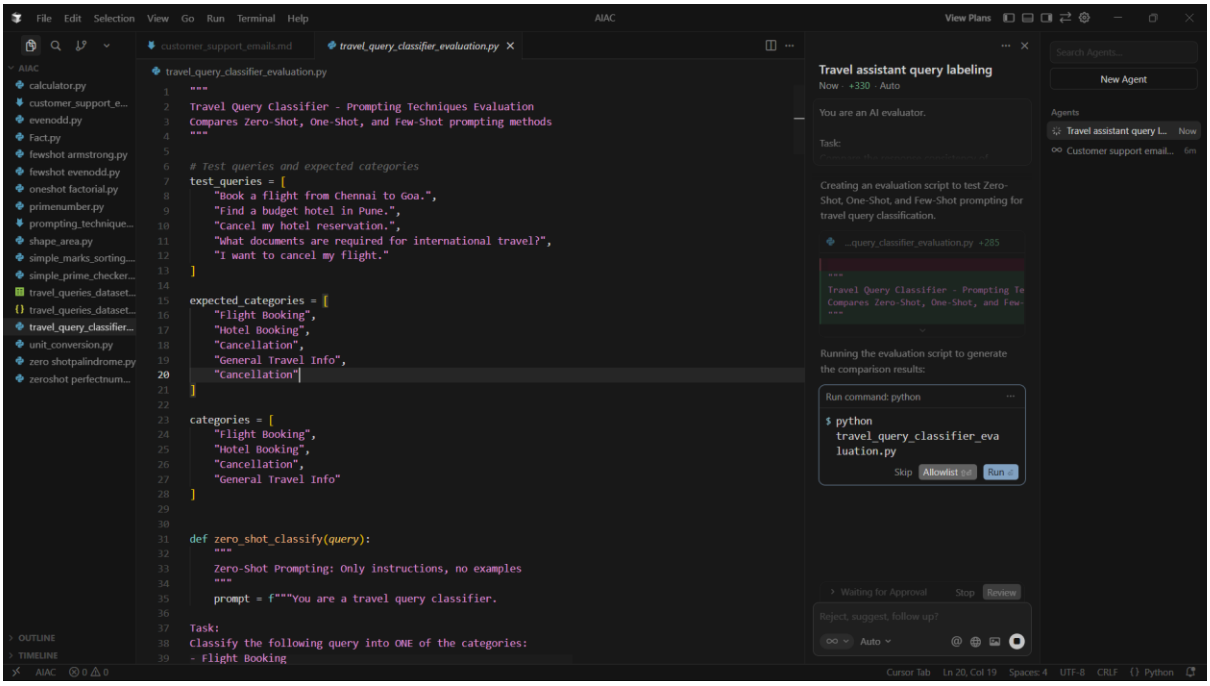
Task:

Flight Booking

You are a travel query classifier.

Task:

Cancellation



```python
"""
Travel Query Classifier - Prompting Techniques Evaluation
Compares Zero-Shot, One-Shot, and Few-Shot prompting methods
"""

# Test queries and expected categories
test_queries = [
    "Book a flight from Chennai to Goa.",
    "Find a budget hotel in Pune.",
    "Cancel my hotel reservation.",
    "What documents are required for international travel?",
    "I want to cancel my flight."
]

expected_categories = [
    "Flight Booking",
    "Hotel Booking",
    "Cancellation",
    "General Travel Info",
    "Cancellation"
]

categories = [
    "Flight Booking",
    "Hotel Booking",
    "Cancellation",
    "General Travel Info"
]


def zero_shot_classify(query):
    """
    Zero-Shot Prompting: Only instructions, no examples
    """
    prompt = f"""You are a travel query classifier.

Task:
Classify the following query into ONE of the categories:
- Flight Booking
```

Travel assistant query labeling

Now · +330 · Auto

You are an AI evaluator.

Task:

Creating an evaluation script to test Zero-Shot, One-Shot, and Few-Shot prompting for travel query classification.

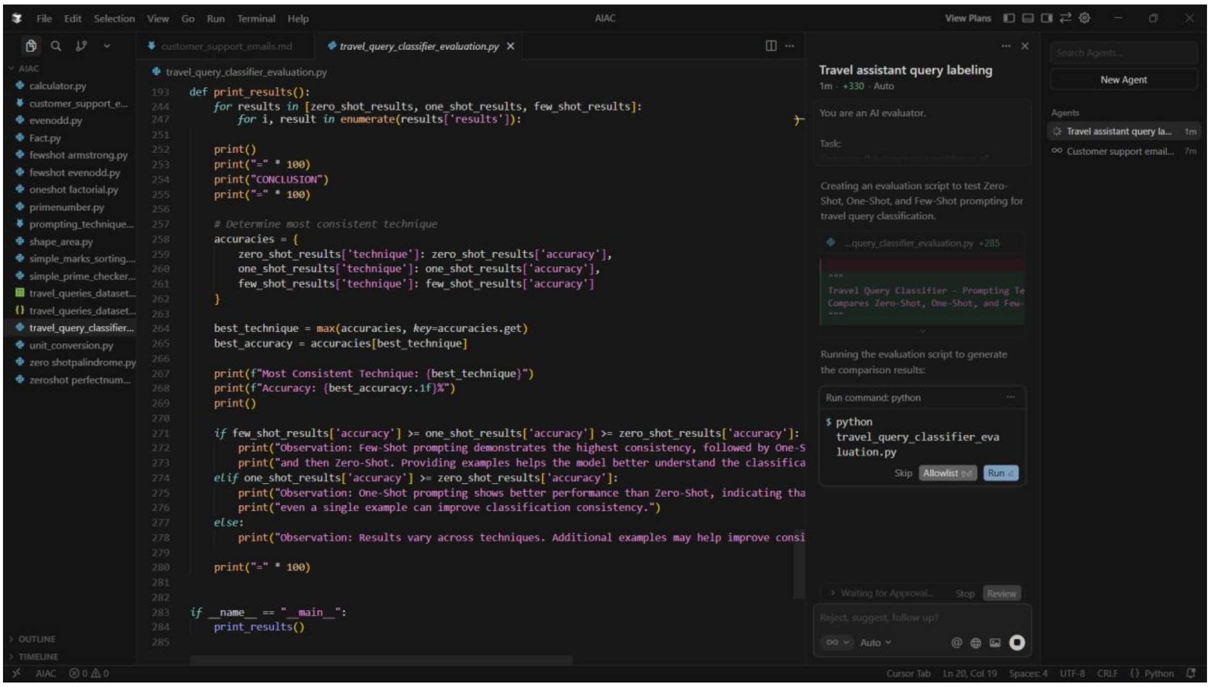
...query_classifier_evaluation.py +285

```
"""
Travel Query Classifier - Prompting Te
Compares Zero-Shot, One-Shot, and Few-
"""
```

Running the evaluation script to generate the comparison results:

Run command: python

```
$ python
  travel_query_classifier_eva
  luation.py
```



```python
def print_results():
    for results in [zero_shot_results, one_shot_results, few_shot_results]:
        for i, result in enumerate(results['results']):

    print()
    print("=" * 100)
    print("CONCLUSION")
    print("=" * 100)

    # Determine most consistent technique
    accuracies = {
        zero_shot_results['technique']: zero_shot_results['accuracy'],
        one_shot_results['technique']: one_shot_results['accuracy'],
        few_shot_results['technique']: few_shot_results['accuracy']
    }

    best_technique = max(accuracies, key=accuracies.get)
    best_accuracy = accuracies[best_technique]

    print(f"Most Consistent Technique: {best_technique}")
    print(f"Accuracy: {best_accuracy:.1f}%")
    print()

    if few_shot_results['accuracy'] >= one_shot_results['accuracy'] >= zero_shot_results['accuracy']:
        print("Observation: Few-Shot prompting demonstrates the highest consistency, followed by One-S
        print("and then Zero-Shot. Providing examples helps the model better understand the classifica
    elif one_shot_results['accuracy'] >= zero_shot_results['accuracy']:
        print("Observation: One-Shot prompting shows better performance than Zero-Shot, indicating tha
        print("even a single example can improve classification consistency.")
    else:
        print("Observation: Results vary across techniques. Additional examples may help improve consi

    print("=" * 100)


if __name__ == "__main__":
    print_results()
```

Travel assistant query labeling

1m · +330 · Auto

You are an AI evaluator.

Task:

Creating an evaluation script to test Zero-Shot, One-Shot, and Few-Shot prompting for travel query classification.

...query_classifier_evaluation.py +285

```
"""
Travel Query Classifier - Prompting Te
Compares Zero-Shot, One-Shot, and Few-
"""
```

Running the evaluation script to generate the comparison results:

Run command: python

```
$ python
  travel_query_classifier_eva
  luation.py
```

3. Programming Question Type Identification

Scenario:

A coding help chatbot must classify queries into Syntax Error, Logic Error, Optimization, or Conceptual Question.

Tasks:

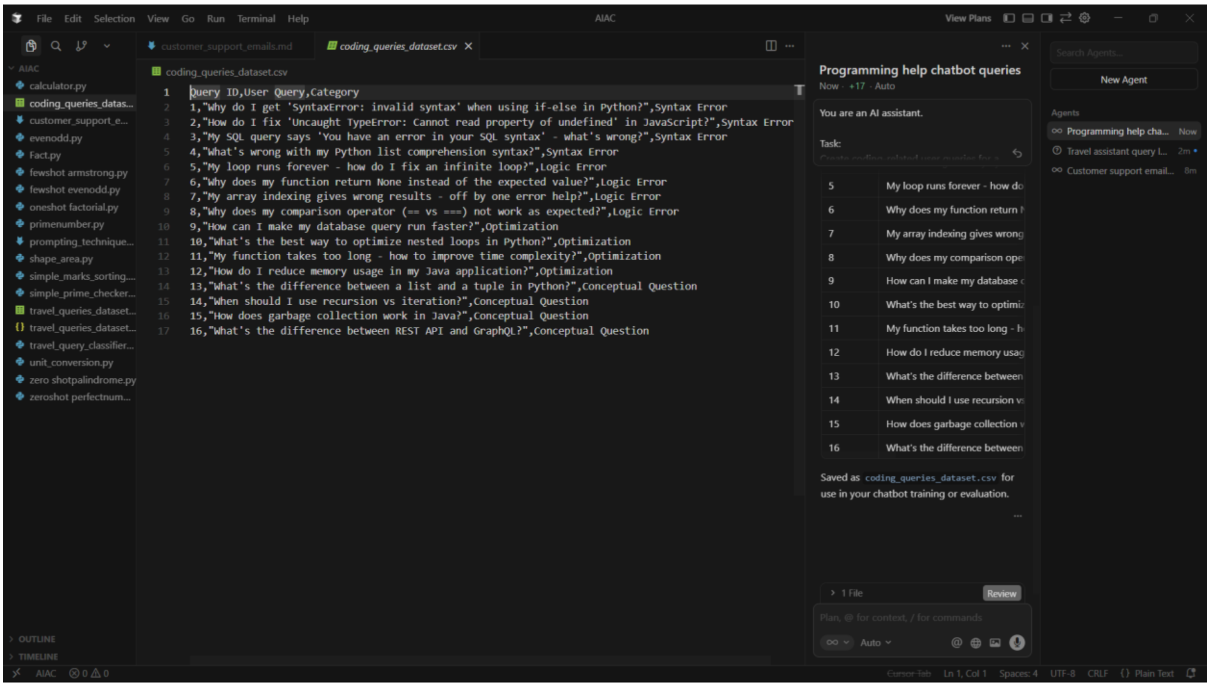
a. Prepare coding-related user queries.

b. Perform Zero-shot classification.

c. Perform One-shot classification.

d. Perform Few-shot classification.

e. Analyze improvements in technical accuracy.



```
Query ID,User Query,Category
1,"Why do I get 'SyntaxError: invalid syntax' when using if-else in Python?",Syntax Error
2,"How do I fix 'Uncaught TypeError: Cannot read property of undefined' in JavaScript?",Syntax Error
3,"My SQL query says 'You have an error in your SQL syntax' - what's wrong?",Syntax Error
4,"What's wrong with my Python list comprehension syntax?",Syntax Error
5,"My loop runs forever - how do I fix an infinite loop?",Logic Error
6,"Why does my function return None instead of the expected value?",Logic Error
7,"My array indexing gives wrong results - off by one error help?",Logic Error
8,"Why does my comparison operator (== vs ===) not work as expected?",Logic Error
9,"How can I make my database query run faster?",Optimization
10,"What's the best way to optimize nested loops in Python?",Optimization
11,"My function takes too long - how to improve time complexity?",Optimization
12,"How do I reduce memory usage in my Java application?",Optimization
13,"What's the difference between a list and a tuple in Python?",Conceptual Question
14,"When should I use recursion vs iteration?",Conceptual Question
15,"How does garbage collection work in Java?",Conceptual Question
16,"What's the difference between REST API and GraphQL?",Conceptual Question
```

Programming help chatbot queries

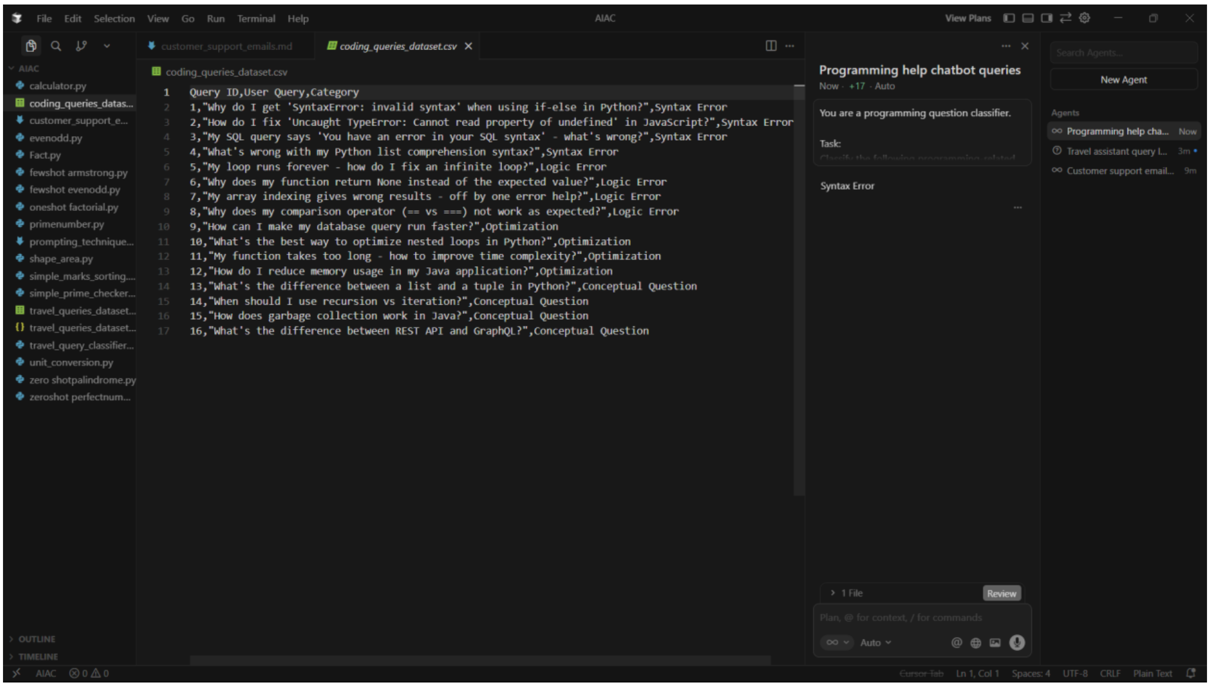
Now · +17 · Auto

You are an AI assistant.

Task:

5	My loop runs forever - how do
6	Why does my function return N
7	My array indexing gives wrong
8	Why does my comparison ope
9	How can I make my database c
10	What's the best way to optimiz
11	My function takes too long - h
12	How do I reduce memory usag
13	What's the difference between
14	When should I use recursion vs
15	How does garbage collection v
16	What's the difference between

Saved as `coding_queries_dataset.csv` for use in your chatbot training or evaluation.



```
Query ID,User Query,Category
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3,"My SQL query says 'You have an error in your SQL syntax' - what's wrong?",Syntax Error
4,"What's wrong with my Python list comprehension syntax?",Syntax Error
5,"My loop runs forever - how do I fix an infinite loop?",Logic Error
6,"Why does my function return None instead of the expected value?",Logic Error
7,"My array indexing gives wrong results - off by one error help?",Logic Error
8,"Why does my comparison operator (== vs ===) not work as expected?",Logic Error
9,"How can I make my database query run faster?",Optimization
10,"What's the best way to optimize nested loops in Python?",Optimization
11,"My function takes too long - how to improve time complexity?",Optimization
12,"How do I reduce memory usage in my Java application?",Optimization
13,"What's the difference between a list and a tuple in Python?",Conceptual Question
14,"When should I use recursion vs iteration?",Conceptual Question
15,"How does garbage collection work in Java?",Conceptual Question
16,"What's the difference between REST API and GraphQL?",Conceptual Question
```

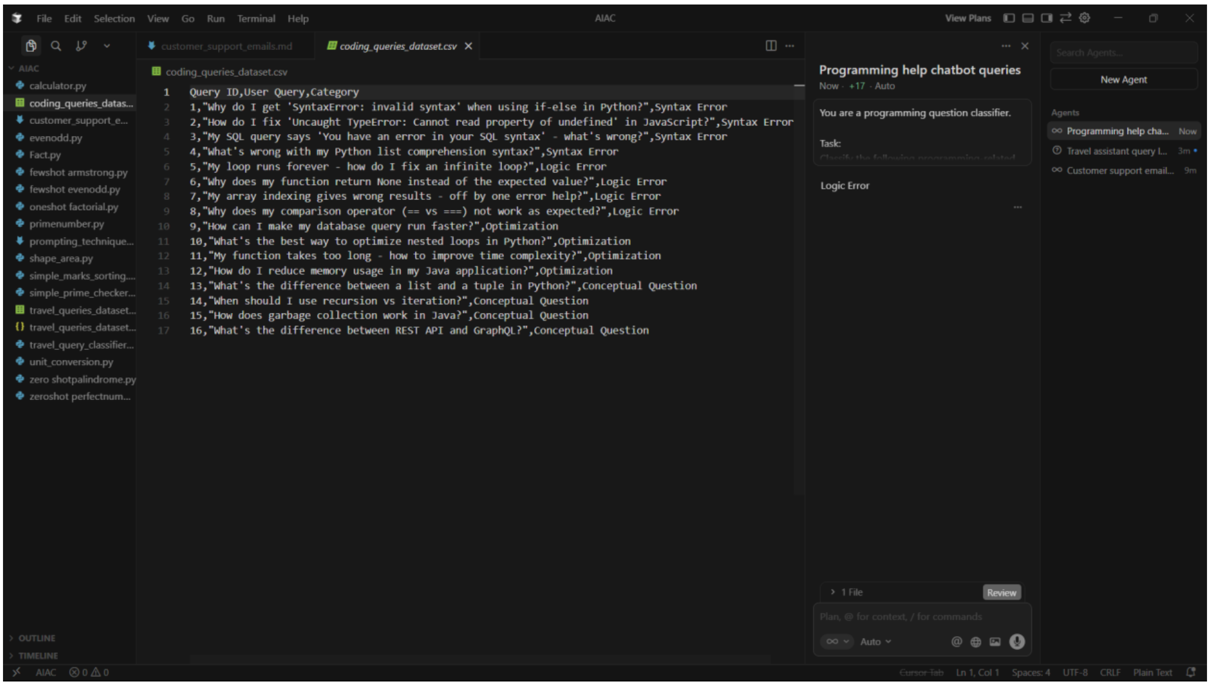
Programming help chatbot queries

Now · +17 · Auto

You are a programming question classifier.

Task:

Syntax Error



coding_queries_dataset.csv

```
Query ID,User Query,Category
1,"Why do I get 'SyntaxError: invalid syntax' when using if-else in Python?",Syntax Error
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4,"What's wrong with my Python list comprehension syntax?",Syntax Error
5,"My loop runs forever - how do I fix an infinite loop?",Logic Error
6,"Why does my function return None instead of the expected value?",Logic Error
7,"My array indexing gives wrong results - off by one error help?",Logic Error
8,"Why does my comparison operator (== vs ===) not work as expected?",Logic Error
9,"How can I make my database query run faster?",Optimization
10,"What's the best way to optimize nested loops in Python?",Optimization
11,"My function takes too long - how to improve time complexity?",Optimization
12,"How do I reduce memory usage in my Java application?",Optimization
13,"What's the difference between a list and a tuple in Python?",Conceptual Question
14,"When should I use recursion vs iteration?",Conceptual Question
15,"How does garbage collection work in Java?",Conceptual Question
16,"What's the difference between REST API and GraphQL?",Conceptual Question
```

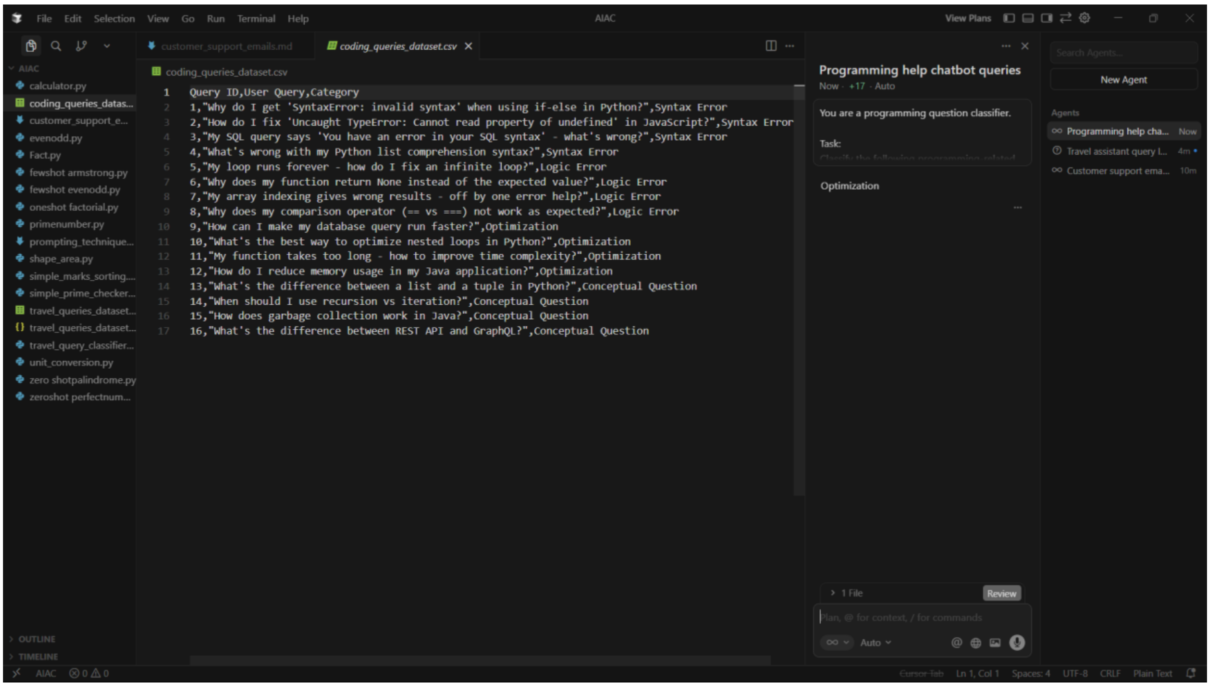
Programming help chatbot queries

Now · +17 · Auto

You are a programming question classifier.

Task:

Logic Error


File Edit Selection View Go Run Terminal Help
AIAC
View Plans
customer_support_emails.md
coding_queries_dataset.csv
Search Agents...
New Agent
Agents
Programming help cha... Now
Travel assistant query l... 4m
Customer support ema... 10m
1 File
Review
Plan, @ for context, / for commands
Auto
Cursor Tab Ln 1, Col 1 Spaces: 4 UTF-8 CRLF Plain Text

coding_queries_dataset.csv

```
Query ID,User Query,Category
1,"Why do I get 'SyntaxError: invalid syntax' when using if-else in Python?",Syntax Error
2,"How do I fix 'Uncaught TypeError: Cannot read property of undefined' in JavaScript?",Syntax Error
3,"My SQL query says 'You have an error in your SQL syntax' - what's wrong?",Syntax Error
4,"What's wrong with my Python list comprehension syntax?",Syntax Error
5,"My loop runs forever - how do I fix an infinite loop?",Logic Error
6,"Why does my function return None instead of the expected value?",Logic Error
7,"My array indexing gives wrong results - off by one error help?",Logic Error
8,"Why does my comparison operator (== vs ===) not work as expected?",Logic Error
9,"How can I make my database query run faster?",Optimization
10,"What's the best way to optimize nested loops in Python?",Optimization
11,"My function takes too long - how to improve time complexity?",Optimization
12,"How do I reduce memory usage in my Java application?",Optimization
13,"What's the difference between a list and a tuple in Python?",Conceptual Question
14,"When should I use recursion vs iteration?",Conceptual Question
15,"How does garbage collection work in Java?",Conceptual Question
16,"What's the difference between REST API and GraphQL?",Conceptual Question
```

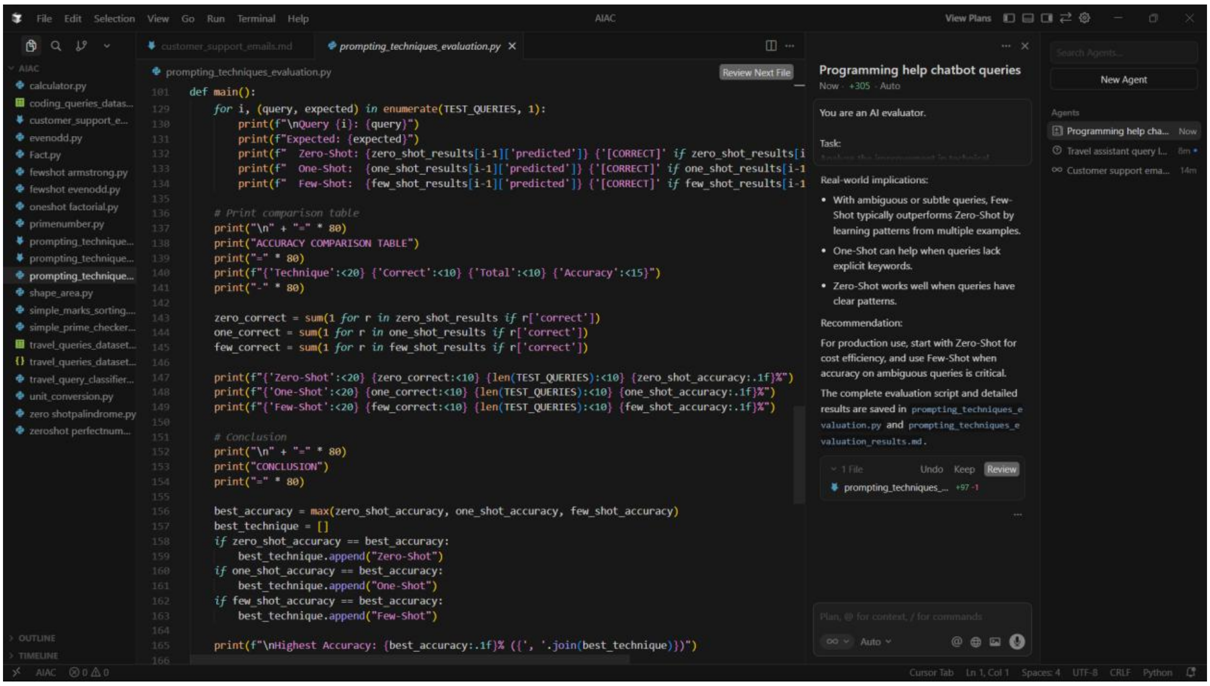
Programming help chatbot queries

Now · +17 · Auto

You are a programming question classifier.

Task:

Optimization



```python
def main():
    for i, (query, expected) in enumerate(TEST_QUERIES, 1):
        print(f"\nQuery {i}: {query}")
        print(f"Expected: {expected}")
        print(f"  Zero-Shot: {zero_shot_results[i-1]['predicted']} {'[CORRECT]' if zero_shot_results[i
        print(f"  One-Shot:  {one_shot_results[i-1]['predicted']} {'[CORRECT]' if one_shot_results[i-1
        print(f"  Few-Shot:  {few_shot_results[i-1]['predicted']} {'[CORRECT]' if few_shot_results[i-1

    # Print comparison table
    print("\n" + "=" * 80)
    print("ACCURACY COMPARISON TABLE")
    print("=" * 80)
    print(f"{'Technique':<20} {'Correct':<10} {'Total':<10} {'Accuracy':<15}")
    print("-" * 80)

    zero_correct = sum(1 for r in zero_shot_results if r['correct'])
    one_correct = sum(1 for r in one_shot_results if r['correct'])
    few_correct = sum(1 for r in few_shot_results if r['correct'])

    print(f"{'Zero-Shot':<20} {zero_correct:<10} {len(TEST_QUERIES):<10} {zero_shot_accuracy:.1f}%")
    print(f"{'One-Shot':<20} {one_correct:<10} {len(TEST_QUERIES):<10} {one_shot_accuracy:.1f}%")
    print(f"{'Few-Shot':<20} {few_correct:<10} {len(TEST_QUERIES):<10} {few_shot_accuracy:.1f}%")

    # Conclusion
    print("\n" + "=" * 80)
    print("CONCLUSION")
    print("=" * 80)

    best_accuracy = max(zero_shot_accuracy, one_shot_accuracy, few_shot_accuracy)
    best_technique = []
    if zero_shot_accuracy == best_accuracy:
        best_technique.append("Zero-Shot")
    if one_shot_accuracy == best_accuracy:
        best_technique.append("One-Shot")
    if few_shot_accuracy == best_accuracy:
        best_technique.append("Few-Shot")

    print(f"\nHighest Accuracy: {best_accuracy:.1f}% ({', '.join(best_technique)})")
```

Programming help chatbot queries

Now · +305 · Auto

You are an AI evaluator.

Task:

Real-world implications:

- With ambiguous or subtle queries, Few-Shot typically outperforms Zero-Shot by learning patterns from multiple examples.
- One-Shot can help when queries lack explicit keywords.
- Zero-Shot works well when queries have clear patterns.

Recommendation:

For production use, start with Zero-Shot for cost efficiency, and use Few-Shot when accuracy on ambiguous queries is critical.

The complete evaluation script and detailed results are saved in `prompting_techniques_evaluation.py` and `prompting_techniques_evaluation_results.md`.

1 File Undo Keep Review

prompting_techniques_... +97 -1

Social Media Post Categorization

Scenario:

A social media analytics tool must classify posts into Promotion,

Complaint, Appreciation, or Inquiry.

Tasks:

1. Prepare sample social media posts.

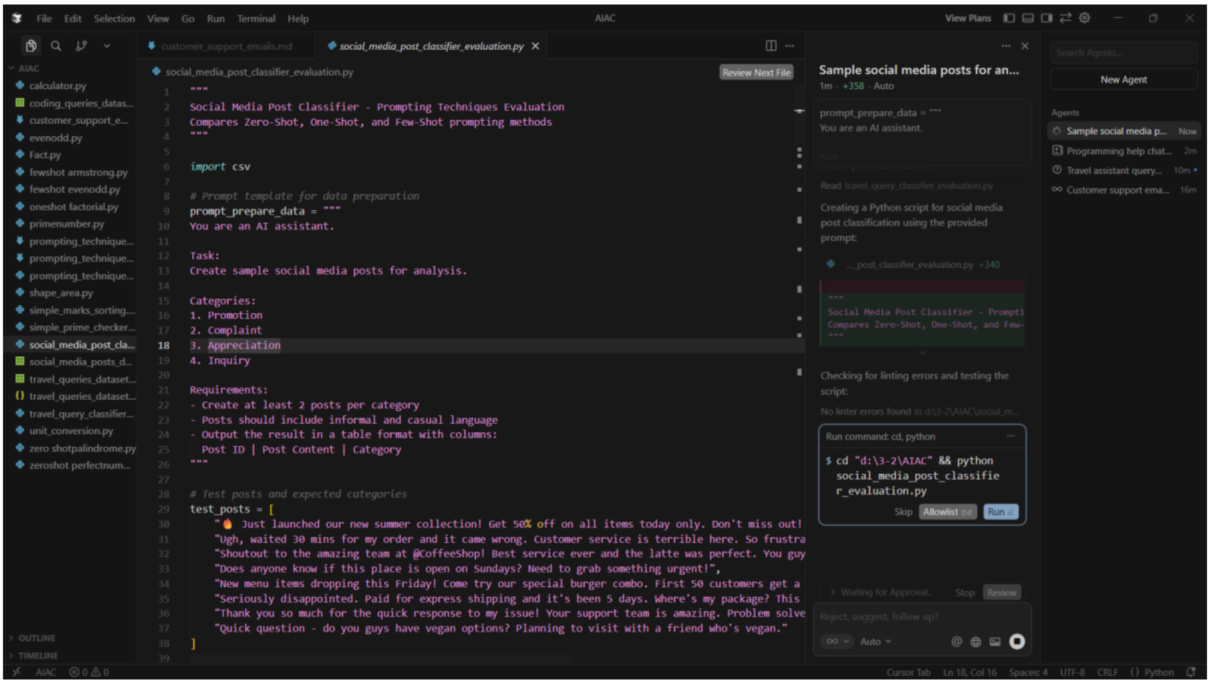
2. Use Zero-shot prompting.

3. Use One-shot prompting.

4. Use Few-shot prompting.

5. Analyze informal language handling.

i want prompt for vsc code in python



social_media_post_classifier_evaluation.py

```
"""
Social Media Post Classifier - Prompting Techniques Evaluation
Compares Zero-Shot, One-Shot, and Few-Shot prompting methods
"""

import csv

# Prompt template for data preparation
prompt_prepare_data = """
You are an AI assistant.

Task:
Create sample social media posts for analysis.

Categories:
1. Promotion
2. Complaint
3. Appreciation
4. Inquiry

Requirements:
- Create at least 2 posts per category
- Posts should include informal and casual language
- Output the result in a table format with columns:
  Post ID | Post Content | Category
"""

# Test posts and expected categories
test_posts = [
    "🔥 Just launched our new summer collection! Get 50% off on all items today only. Don't miss out!
    "Ugh, waited 30 mins for my order and it came wrong. Customer service is terrible here. So frustra
    "Shoutout to the amazing team at @CoffeeShop! Best service ever and the latte was perfect. You guy
    "Does anyone know if this place is open on Sundays? Need to grab something urgent!",
    "New menu items dropping this Friday! Come try our special burger combo. First 50 customers get a
    "Seriously disappointed. Paid for express shipping and it's been 5 days. Where's my package? This
    "Thank you so much for the quick response to my issue! Your support team is amazing. Problem solve
    "Quick question - do you guys have vegan options? Planning to visit with a friend who's vegan."
]
```

Sample social media posts for an...

1m · +358 · Auto

prompt_prepare_data = """
You are an AI assistant.

Read travel_query_classifier_evaluation.py

Creating a Python script for social media post classification using the provided prompt:

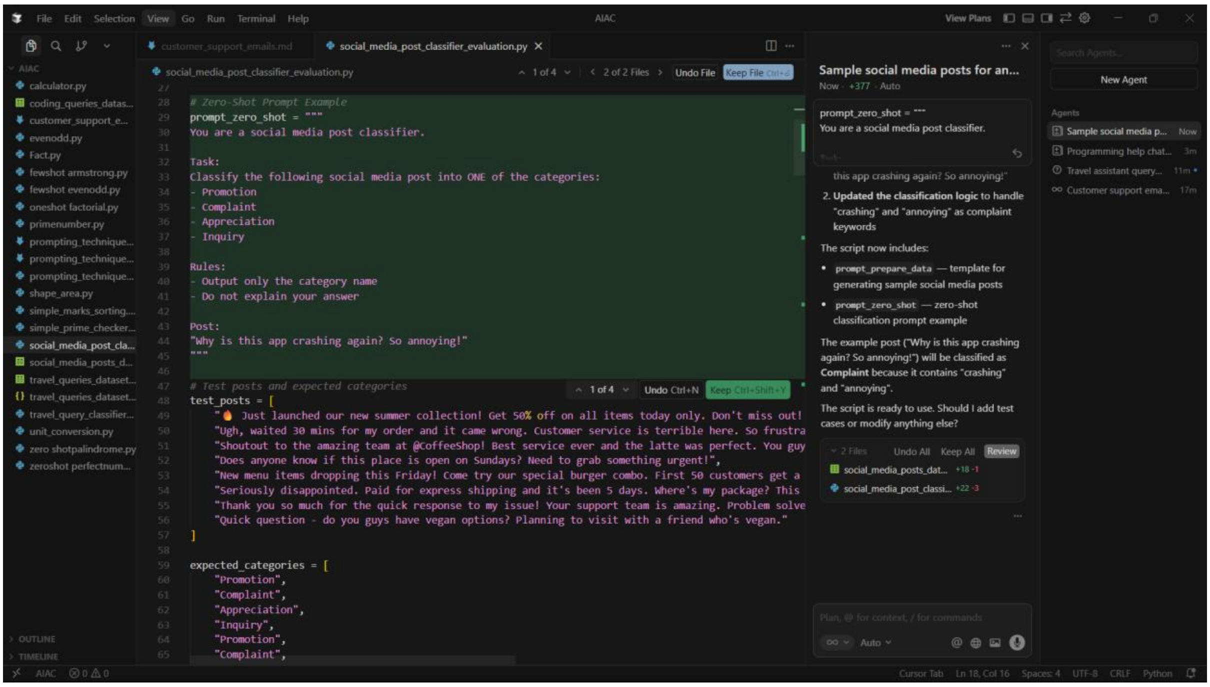
..._post_classifier_evaluation.py +340

Checking for linting errors and testing the script:

No linter errors found in d:\3-2\AIAC\social_m...

Run command: cd, python

```
$ cd "d:\3-2\AIAC" && python social_media_post_classifier_evaluation.py
```



social_media_post_classifier_evaluation.py

```
# Zero-Shot Prompt Example
prompt_zero_shot = """
You are a social media post classifier.

Task:
Classify the following social media post into ONE of the categories:
- Promotion
- Complaint
- Appreciation
- Inquiry

Rules:
- Output only the category name
- Do not explain your answer

Post:
"Why is this app crashing again? So annoying!"
"""

# Test posts and expected categories
test_posts = [
    "🔥 Just launched our new summer collection! Get 50% off on all items today only. Don't miss out!
    "Ugh, waited 30 mins for my order and it came wrong. Customer service is terrible here. So frustra
    "Shoutout to the amazing team at @CoffeeShop! Best service ever and the latte was perfect. You guy
    "Does anyone know if this place is open on Sundays? Need to grab something urgent!",
    "New menu items dropping this Friday! Come try our special burger combo. First 50 customers get a
    "Seriously disappointed. Paid for express shipping and it's been 5 days. Where's my package? This
    "Thank you so much for the quick response to my issue! Your support team is amazing. Problem solve
    "Quick question - do you guys have vegan options? Planning to visit with a friend who's vegan."
]

expected_categories = [
    "Promotion",
    "Complaint",
    "Appreciation",
    "Inquiry",
    "Promotion",
    "Complaint",
```

Sample social media posts for an...

Now · +377 · Auto

prompt_zero_shot = """
You are a social media post classifier.

this app crashing again? So annoying!"

2. **Updated the classification logic** to handle "crashing" and "annoying" as complaint keywords

The script now includes:

- `prompt_prepare_data` — template for generating sample social media posts
- `prompt_zero_shot` — zero-shot classification prompt example

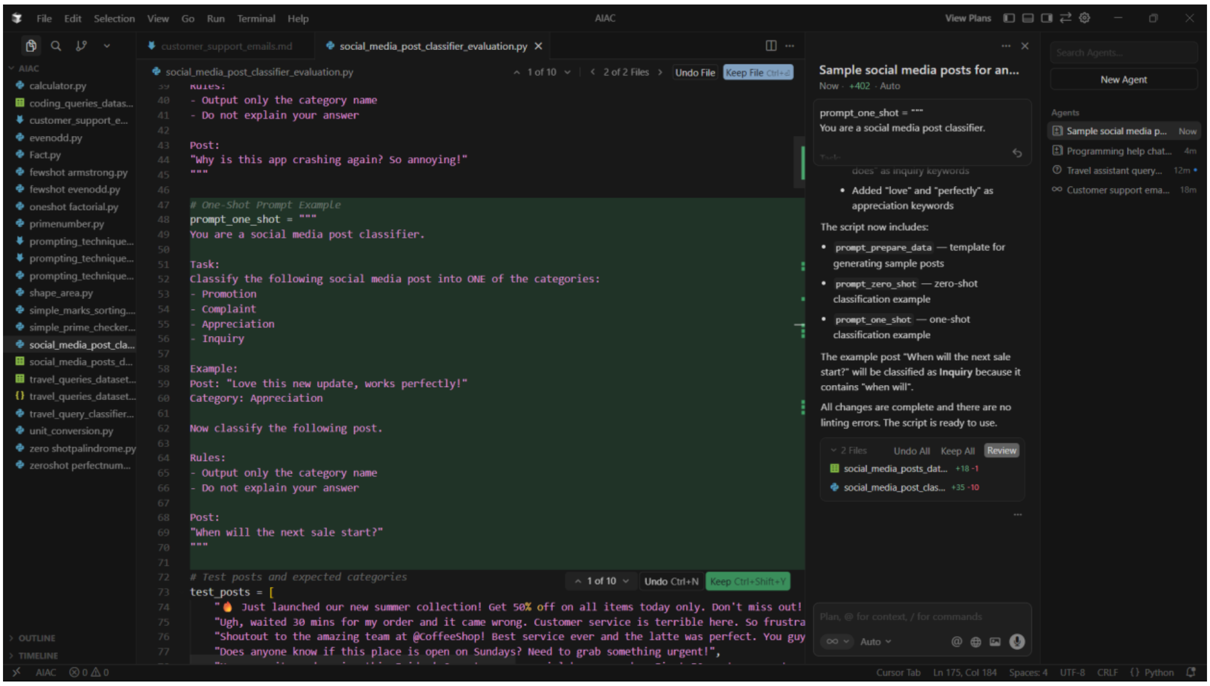
The example post ("Why is this app crashing again? So annoying!") will be classified as **Complaint** because it contains "crashing" and "annoying".

The script is ready to use. Should I add test cases or modify anything else?

2 Files

social_media_posts_dat... +18 -1

social_media_post_classi... +22 -3



```
Rules:
- Output only the category name
- Do not explain your answer

Post:
"Why is this app crashing again? So annoying!"
"""

# One-Shot Prompt Example
prompt_one_shot = """
You are a social media post classifier.

Task:
Classify the following social media post into ONE of the categories:
- Promotion
- Complaint
- Appreciation
- Inquiry

Example:
Post: "Love this new update, works perfectly!"
Category: Appreciation

Now classify the following post.

Rules:
- Output only the category name
- Do not explain your answer

Post:
"When will the next sale start?"
"""

# Test posts and expected categories
test_posts = [
    "🔥 Just launched our new summer collection! Get 50% off on all items today only. Don't miss out!
    "Ugh, waited 30 mins for my order and it came wrong. Customer service is terrible here. So frustra
    "Shoutout to the amazing team at @CoffeeShop! Best service ever and the latte was perfect. You guy
    "Does anyone know if this place is open on Sundays? Need to grab something urgent!",
```

Sample social media posts for an...

Now · +402 · Auto

prompt_one_shot = """
You are a social media post classifier.

does" as inquiry keywords

- Added "love" and "perfectly" as appreciation keywords

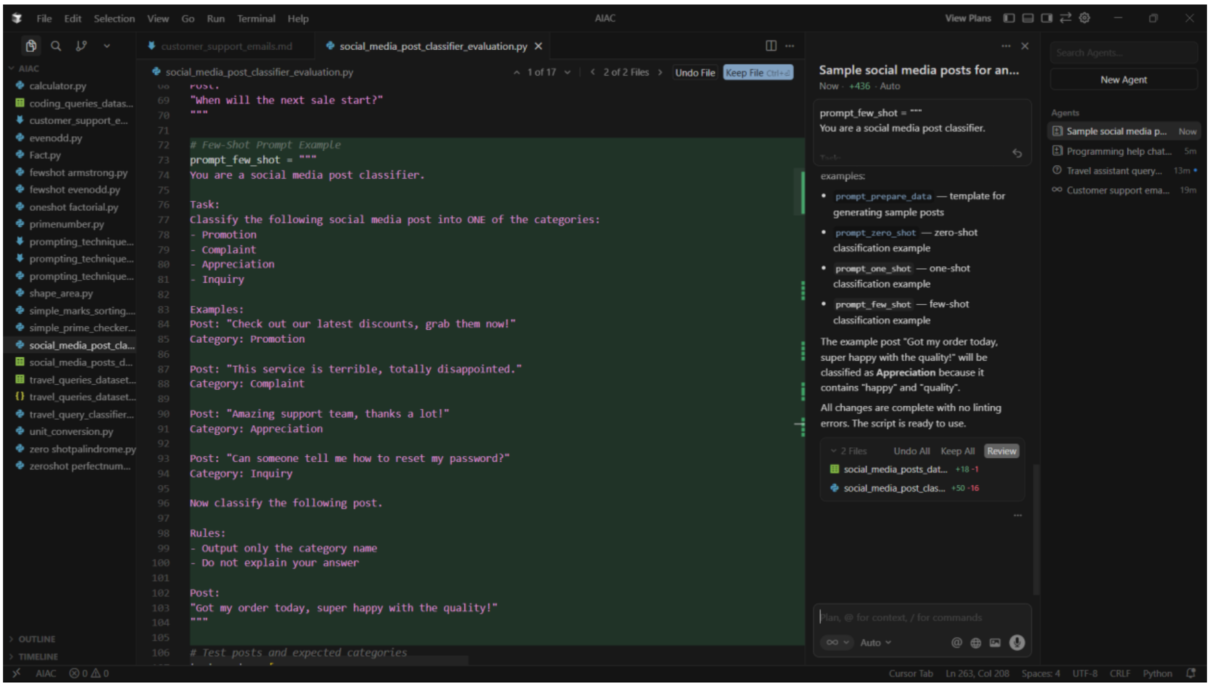
The script now includes:

- `prompt_prepare_data` — template for generating sample posts
- `prompt_zero_shot` — zero-shot classification example
- `prompt_one_shot` — one-shot classification example

The example post "When will the next sale start?" will be classified as **Inquiry** because it contains "when will".

All changes are complete and there are no linting errors. The script is ready to use.

2 Files Undo All Keep All Review
social_media_posts_dat... +18 -1
social_media_post_clas... +35 -10



```
Post:
"When will the next sale start?"
"""

# Few-Shot Prompt Example
prompt_few_shot = """
You are a social media post classifier.

Task:
Classify the following social media post into ONE of the categories:
- Promotion
- Complaint
- Appreciation
- Inquiry

Examples:
Post: "Check out our latest discounts, grab them now!"
Category: Promotion

Post: "This service is terrible, totally disappointed."
Category: Complaint

Post: "Amazing support team, thanks a lot!"
Category: Appreciation

Post: "Can someone tell me how to reset my password?"
Category: Inquiry

Now classify the following post.

Rules:
- Output only the category name
- Do not explain your answer

Post:
"Got my order today, super happy with the quality!"
"""

# Test posts and expected categories
```

Sample social media posts for an...

Now · +436 · Auto

prompt_few_shot = """
You are a social media post classifier.

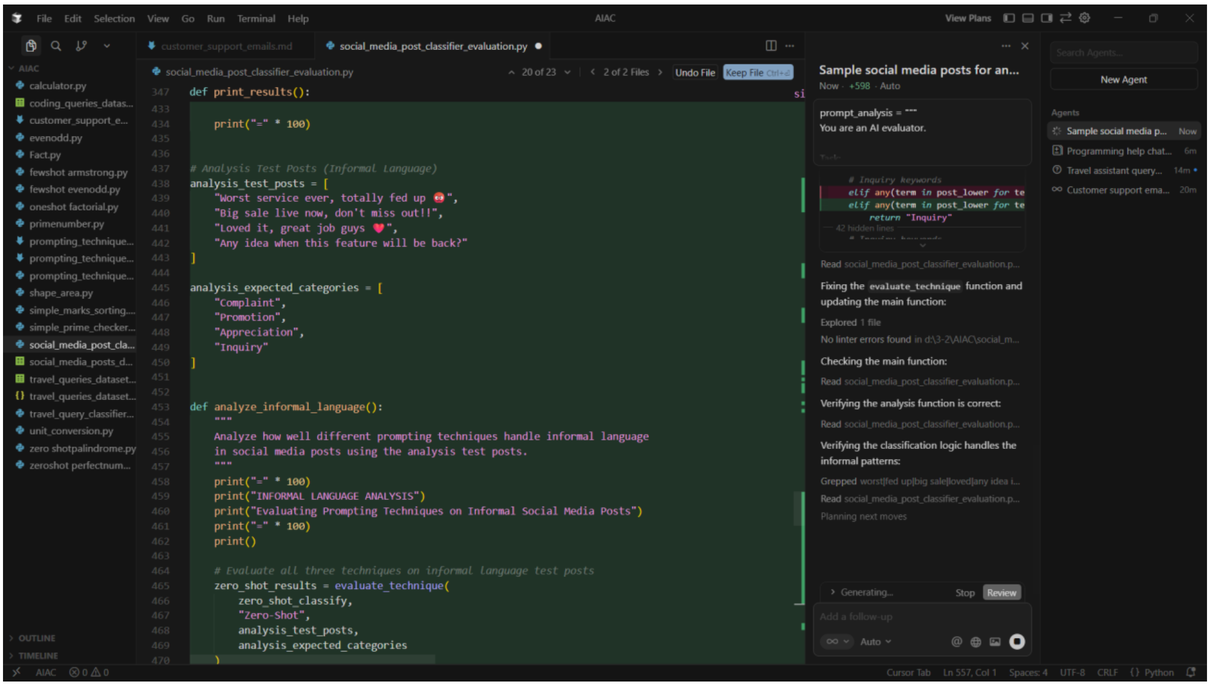
examples:

- `prompt_prepare_data` — template for generating sample posts
- `prompt_zero_shot` — zero-shot classification example
- `prompt_one_shot` — one-shot classification example
- `prompt_few_shot` — few-shot classification example

The example post "Got my order today, super happy with the quality!" will be classified as **Appreciation** because it contains "happy" and "quality".

All changes are complete with no linting errors. The script is ready to use.

2 Files Undo All Keep All Review
social_media_posts_dat... +18 -1
social_media_post_clas... +50 -16



```python
def print_results():

    print("=" * 100)


# Analysis Test Posts (Informal Language)
analysis_test_posts = [
    "Worst service ever, totally fed up 😡",
    "Big sale live now, don't miss out!!",
    "Loved it, great job guys ❤️",
    "Any idea when this feature will be back?"
]

analysis_expected_categories = [
    "Complaint",
    "Promotion",
    "Appreciation",
    "Inquiry"
]


def analyze_informal_language():
    """
    Analyze how well different prompting techniques handle informal language
    in social media posts using the analysis test posts.
    """
    print("=" * 100)
    print("INFORMAL LANGUAGE ANALYSIS")
    print("Evaluating Prompting Techniques on Informal Social Media Posts")
    print("=" * 100)
    print()

    # Evaluate all three techniques on informal language test posts
    zero_shot_results = evaluate_technique(
        zero_shot_classify,
        "Zero-Shot",
        analysis_test_posts,
        analysis_expected_categories
    )
```

Sample social media posts for an...

Now · +598 · Auto

prompt_analysis = """
You are an AI evaluator.

```python
        # Inquiry keywords
        elif any(term in post_lower for te
        elif any(term in post_lower for te
            return "Inquiry"
```

42 hidden lines

Read social_media_post_classifier_evaluation.p...

Fixing the `evaluate_technique` function and updating the main function:

Explored 1 file

No linter errors found in d:\3-2\AIAC\social_m...

Checking the main function:

Read social_media_post_classifier_evaluation.p...

Verifying the analysis function is correct:

Read social_media_post_classifier_evaluation.p...

Verifying the classification logic handles the informal patterns:

Grepped worst|fed up|big sale|loved|any idea i...

Read social_media_post_classifier_evaluation.p...

Planning next moves