

few_shot

October 12, 2024

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[ ]: from priomptipy import SystemMessage, UserMessage, AssistantMessage, Scope, \
      ↪render
      from pprint import pprint
      import pandas as pd
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[ ]: def add_few_shot(examples):
      few_shot_scope = []
      for ex in examples:
          # Create a Scope object for each example with highest priority
          few_shot_scope.append(Scope([
              UserMessage(ex["input"]),
              AssistantMessage(ex["output"])
          ], absolute_priority=10))
      return few_shot_scope
```

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[ ]: sales_data = {
      'Product': ['A', 'B', 'C', 'D', 'E'],
      'Sales (Jan)': [100, 80, 50, 90, 200],
      'Sales (Feb)': [150, 90, 60, 100, 210],
      'Sales (Mar)': [200, 120, 70, 110, 220],
      'Sales (Apr)': [250, 130, 80, 120, 230],
      'Sales (May)': [300, 160, 100, 130, 240],
      'Sales (Jun)': [350, 200, 110, 140, 250]
  }
  sales_df = pd.DataFrame(sales_data)
  df_as_text = sales_df.to_string(index=False)
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[ ]: few_shot_data = [
      {"input": "Analyze the sales trend for Product B over six months.",
       "output": "Product B shows a steady growth over the six-month period.\nSales grew from 80 in January to 200 in June, indicating a total\n↪increase of 150%."},

      {"input": "Which product had the highest total sales over the last six\n↪months?",
       "output": "Product E had the highest total sales over six months, with a\n↪combined total of 1,350 units."}]
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        {"input": "Compare the growth rates of Products A and C over the six-month\
        ↪period.",
         "output": "Product A grew by 250%, while Product C grew by 120%. Product A\
        ↪exhibited a stronger growth rate."},

        {"input": "What is the average monthly sales for Product D?",
         "output": "The average monthly sales for Product D is 115 units."}
    ]
    few_shot_examples = add_few_shot(few_shot_data)

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[ ]: system_message = [SystemMessage("You are Quarkle, an AI Developmental Editor")]

actual_conversation = [UserMessage(f"Here is the sales data:\n{df_as_text}\n\
        Calculate the percentage increase in sales\
        ↪for Product E from January to June.")]

```

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[ ]: # Combine all message components
messages = system_message + few_shot_examples + actual_conversation
# Set rendering options including token limit and tokenizer
render_options = {"token_limit": 1000, "tokenizer": "cl100k_base"}
# Render the messages
result = await render(messages, render_options)
pprint(result['prompt'])

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{'messages': [{'content': 'You are Quarkle, an AI Developmental Editor',
                  'role': 'system'},
               {'content': 'Analyze the sales trend for Product B over six '
                           'months.',
                  'role': 'user'},
               {'content': 'Product B shows a steady growth over the six-month '
                           'period. Sales grew from 80 in January to 200 '
                           'in June, indicating a total increase of 150%.',
                  'role': 'assistant'},
               {'content': 'Which product had the highest total sales over the '
                           'last six months?',
                  'role': 'user'},
               {'content': 'Product E had the highest total sales over six '
                           'months, with a combined total of 1,350 units.',
                  'role': 'assistant'},
               {'content': 'Compare the growth rates of Products A and C over '
                           'the six-month period.',
                  'role': 'user'},
               {'content': 'Product A grew by 250%, while Product C grew by '
                           '120%. Product A exhibited a stronger growth rate.',
                  'role': 'assistant'},
               {'content': 'What is the average monthly sales for Product D?',
                  'role': 'user'},

```

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{'content': 'The average monthly sales for Product D is 115 '
'units.',
'role': 'assistant'},
{'content': 'Here is the sales data:\n'
'Product Sales (Jan) Sales (Feb) Sales (Mar) '
'Sales (Apr) Sales (May) Sales (Jun)\n'
'    A      100      150      '
'200      250      300      350\n'
'    B      80      90      '
'120      130      160      200\n'
'    C      50      60      '
'70      80      100      110\n'
'    D      90      100      '
'110      120      130      140\n'
'    E      200      210      '
'220      230      240      250\n'
'                                Calculate the '
'percentage increase in sales for Product E from '
'January to June.',
'role': 'user'}],
'type': 'chat'}
```