Prompt for sentiment analysis

Sentiment analysis promopt in ChatGPT VS Local Llama3-70B:

ChatGPT and Llama3 are powerful LLM to do NLP task. We use the data below to compare the two versions of prompt codes results by 2 LLM model. LLM models need to generate 2 things, **summary text** and **score**. The rows highlighted in yellow are our target.

Input:

Score	Summary	Text
5	Good Quality D	I have bought several of the Vitality canned dog food products and have fo
1	Not as Advertis	Product arrived labeled as Jumbo Salted Peanuts...the peanuts were actu
1	My Cats Are Not	My cats have been happily eating Felidae Platinum for more than two year
2	Cough Medicine	If you are looking for the secret ingredient in Robitussin I believe I have fou
3	Mushy	The flavors are good. However, I do not see any differce between this and
4	Nice Taffy	I got a wild hair for taffy and ordered this five pound bag. The taffy was all
5	Great! Just as g	This saltwater taffy had great flavors and was very soft and chewy. Each ca

Conclusion

- ○ More shots prompt is better than 1 shot prompt.
- ○ Prompt version 2 Framework: Role + Full context+ Task+ Answer : Cot + 5 shots(all score examples) is better.

Below content is prompt detail

Prompt version 1:

Framework: Role + Full context+ Task+ Answer : Cot + 1 shot

Prompt:

You are data scientist and your task is review analysis. The review score is from 1 to 5. We can consider a negative review will have a score between 1 and 2, 3 is neutral and a positive review will have a score equal to 4 or 5. You need to provide summary text and Sentiment Scoring for those reviews.

For example:

Input:

the review text: {l have bought several of the Vitality canned dog food products andhave found them all to be of good quality. The product looks more like a stew than a processedmeat and it smells better, My Labrador is finicky and she appreciates this product better thanmost.}

Output:

Summary text: {Good Quality Dog Food}, score: {5}

Could you analyse those reviews and give the summary text and score? review text: {Product arrivedlabeled as jumbo Salted Peanuts..the peanuts were actually small sized unsalted. Not sure if this was an error or if the vendor intended to represent the product as "jumbo".}; review text: {This saltwater taffy had great flavors and was very soft and chewy. Each candy was individually wrapped well. None of the candies were stuck together, which did happen in the expensive version, Fralinger's. Would highly recommend this candy! I served it at a beach-themed party and everyone loved it!}

Result comparing in ChatGPT vs Llama 3-70B:

ChatGPT:

ChatGPT ∨

Certainly! Here is the analysis of the provided reviews:

1. **Review Text**: Product arrived labeled as jumbo Salted Peanuts..the peanuts were actually small sized unsalted. Not sure if this was an error or if the vendor intended to represent the product as "jumbo".
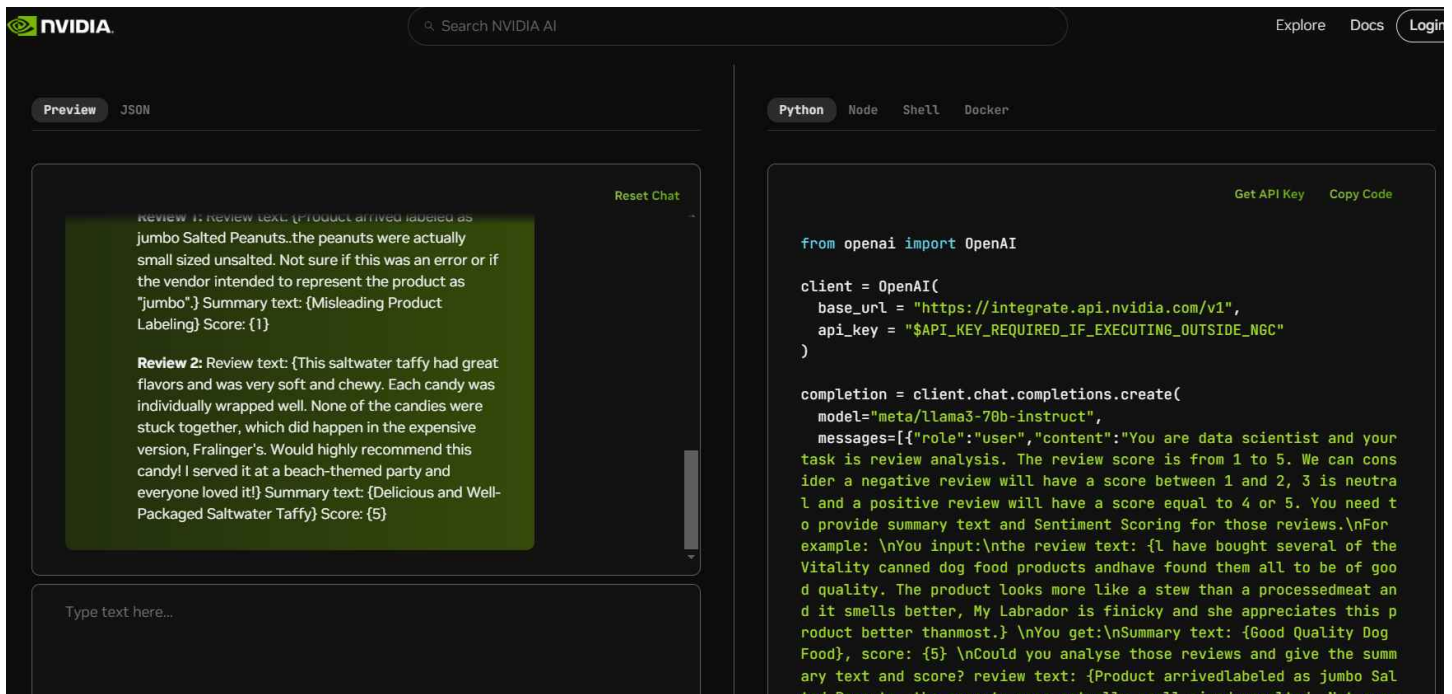
    - **Summary Text**: Mislabeled and Unsalted Peanuts
    - **Score**: 2

2. **Review Text**: This saltwater taffy had great flavors and was very soft and chewy. Each candy was individually wrapped well. None of the candies were stuck together, which did happen in the expensive version, Fralinger's. Would highly recommend this candy! I served it at a beach-themed party and everyone loved it!

    - **Summary Text**: Highly Recommended Saltwater Taffy
    - **Score**: 5

Let me know if you have more reviews for analysis or any other requests!

Llama3-70B :

Llama3-70B models give all correct scores but ChatGPT not, two models' summary text are close to the correct answer.

Prompt version 2:

Framework: Role + Full context+ Task+ Answer : Cot + 5 shots(all score examples)

Prompt:

You are data scientist and your task is review analysis. The review score is from 1 to 5. We can consider a negative review will have a score between 1 and 2, 3 is neutral and a positive review will have a score equal to 4 or 5. You need to provide summary text and Sentiment Scoring for those reviews.

Below is some example:

Example 1:

Input:

the review text: {l have bought several of the Vitality canned dog food products andhave found them all to be of good quality. The product looks more like a stew than a processedmeat and it smells better, My Labrador is finicky and she appreciates this product better thanmost.}

Output:

Summary text: {Good Quality Dog Food}, score: {5}

Example 2:

Input:

the review text: {If you are looking for the secret ingredient in Robitussin, I believe I have found it. I got this in addition to the Root Beer Extract I ordered (which was good) and made some

cherry soda. The flavor is very medicinal.}

Output:

Summary text: {Cough Medicine}, score: {2}

Example 3:

Input:

the review text: {I got a wild hair for taffy and ordered this five pound bag. The taffy was all very enjoyable with many flavors: watermelon, root beer, melon, peppermint, grape, etc. My only complaint is there was a bit too much red/black licorice-flavored pieces (just not my particular favorites). Between me, my kids, and my husband, this lasted only two weeks! I would recommend this brand of taffy -- it was a delightful treat.}

Output:

Summary text: {Nice Taffy}, score: {4}

Example 4:

Input:

the review text: {My cats have been happily eating Felidae Platinum for more than two years. I just got a new bag and the shape of the food is different. They tried the new food when I first put it in their bowls and now the bowls sit full and the kitties will not touch the food. I've noticed similar reviews related to formula changes in the past. Unfortunately, I now need to find a new food that my cats will eat.}

Output:

Summary text: {My Cats Are Not Fans of the New Food}, score: {1}

Example 5:

Input:

the review text: {The flavors are good. However, I do not see any differce between this and Oaker Oats brand - they are both mushy.}

Output:

Summary text: {Mushy}, score: {3}

Could you analyse those 2 reviews and give the summary text and score? review text: {Product arrivedlabeled as jumbo Salted Peanuts..the peanuts were actually small sized unsalted. Not sure if this was an error or if the vendor intended to represent the product as "jumbo".};

review text: {This saltwater taffy had great flavors and was very soft and chewy. Each candy was individually wrapped well. None of the candies were stuck together, which did happen in the expensive version, Fralinger's. Would highly recommend this candy! I served it at a beach-themed party and everyone loved it!}

Result comparing in ChatGPT vs Llama 3-70B:

ChatGPT:

was very soft and chewy. Each candy was individually wrapped well. None of the candies were stuck together, which did happen in the expensive version, Fralinger's. Would highly recommend this candy! I served it at a beach-themed party and everyone loved it!}

Sure! Here are the analyses for the provided reviews:

Review 1:
Review text: {Product arrived labeled as jumbo Salted Peanuts..the peanuts were actually small sized unsalted. Not sure if this was an error or if the vendor intended to represent the product as "jumbo".}

Summary text: {Misleading Jumbo Salted Peanuts}

Score: {1}

The score of 1 indicates strong dissatisfaction due to the product not matching its description.

Review 2:
Review text: {This saltwater taffy had great flavors and was very soft and chewy. Each candy was individually wrapped well. None of the candies were stuck together, which did happen in the expensive version, Fralinger's. Would highly recommend this candy! I served it at a beach-themed party and everyone loved it!}

Summary text: {Highly Recommend Soft and Chewy Saltwater Taffy}

Score: {5}

The score of 5 reflects high satisfaction with the product, noting its great flavors, texture, and packaging.

Llama3-7B:

Reset Chat

I'd be happy to help with the review analysis.

Review 1: Review text: {Product arrived labeled as jumbo Salted Peanuts..the peanuts were actually small sized unsalted. Not sure if this was an error or if the vendor intended to represent the product as "jumbo".} Summary text: {Misleading Product Label}, score: {1}

Review 2: Review text: {This saltwater taffy had great flavors and was very soft and chewy. Each candy was individually wrapped well. None of the candies were stuck together, which did happen in the expensive version, Fralinger's. Would highly recommend this candy! I served it at a beach-themed party and everyone loved it!} Summary text: {Delicious Saltwater Taffy}, score: {5}

Type text here...

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```python
from openai import OpenAI

client = OpenAI(
  base_url = "https://integrate.api.nvidia.com/v1",
  api_key = "$API_KEY_REQUIRED_IF_EXECUTING_OUTSIDE_NGC"
)

completion = client.chat.completions.create(
  model="meta/llama3-70b-instruct",
  messages=[{"role":"user","content":"You are data scientist and your task is review analysis. The review score is from 1 to 5. We can consider a negative review will have a score between 1 and 2, 3 is neutral and a positive review will have a score equal to 4 or 5. You need to provide summary text and Sentiment Scoring for those reviews.\nBelow is some example: \nExample 1:\nYou input:\nthe review text: {I have bought several of the Vitality canned dog food products andhave found them all to be of good quality. The product looks more like a stew than a processedmeat and it smells better, My Labrador is finicky and she appreciates this product better thanmost.} \nYou get:\nSummary text: {Good Quality Dog Food}, score: {5} \nExample 2:\nYou input:\nthe review text: {If you are looking for the secret ingredient in Robitussin, I believe I have found it.  I got this in addition to the Root Beer Extract I ordered (which was good) and made some cherry soda. The flavor is very medicinal.} \nYou get:\nSummary text: {Cough Medicine}, score: {2} \nExample 3:\nYou input:\nthe review text: {I got a wild hair for taffy and ordered this five pound bag. The taffy was all
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Two models' scores are the same as the correct one. Version 2 is obviously better.

Llama3 model URL:

Web to try Llama3-70B: https://build.nvidia.com/meta/llama3-70b