

Summarizing

In this lesson, you will summarize text with a focus on specific topics.

Setup

In [2]:

```
import openai
import os

from dotenv import load_dotenv, find_dotenv
_ = load_dotenv(find_dotenv()) # read local .env file

openai.api_key = os.getenv('OPENAI_API_KEY')
```

In [3]:

```
def get_completion(prompt, model="gpt-3.5-turbo"): # Andrew mentioned that the prompt,
    messages = [{"role": "user", "content": prompt}]
    response = openai.ChatCompletion.create(
        model=model,
        messages=messages,
        temperature=0, # this is the degree of randomness of the model's output
    )
    return response.choices[0].message["content"]
```

Text to summarize

In [4]:

```
prod_review = """
Got this panda plush toy for my daughter's birthday, \
who loves it and takes it everywhere. It's soft and \
super cute, and its face has a friendly look. It's \
a bit small for what I paid though. I think there \
might be other options that are bigger for the \
same price. It arrived a day earlier than expected, \
so I got to play with it myself before I gave it \
to her.
"""
```

Summarize with a word/sentence/character limit

In [5]:

```
prompt = f"""
Your task is to generate a short summary of a product \
review from an ecommerce site.

Summarize the review below, delimited by triple
backticks, in at most 30 words.

Review: ```{prod_review}```
"""

response = get_completion(prompt)
print(response)
```

Soft and cute panda plush toy loved by daughter, but a bit small for the price. Arrived early.

Summarize with a focus on shipping and delivery

In [6]:

```
prompt = f"""
Your task is to generate a short summary of a product \
review from an ecommerce site to give feedback to the \
Shipping department.

Summarize the review below, delimited by triple
backticks, in at most 30 words, and focusing on any aspects \
that mention shipping and delivery of the product.

Review: ```{prod_review}```
"""

response = get_completion(prompt)
print(response)
```

The panda plush toy arrived a day earlier than expected, but the customer felt it was a bit small for the price paid.

Summarize with a focus on price and value

In [7]:

```
prompt = f"""
Your task is to generate a short summary of a product \
review from an ecommerce site to give feedback to the \
pricing department, responsible for determining the \
price of the product.

Summarize the review below, delimited by triple
backticks, in at most 30 words, and focusing on any aspects \
that are relevant to the price and perceived value.

Review: ```{prod_review}```
"""

response = get_completion(prompt)
print(response)
```

The panda plush toy is soft, cute, and loved by the recipient, but the price may be too high for its size.

Comment

- Summaries include topics that are not related to the topic of focus.

Try "extract" instead of "summarize"

In [8]:

```
prompt = f"""
Your task is to extract relevant information from \
a product review from an ecommerce site to give \
feedback to the Shipping department.

From the review below, delimited by triple quotes \
extract the information relevant to shipping and \
delivery. Limit to 30 words.

Review: ```{prod_review}```
"""

response = get_completion(prompt)
print(response)
```

The product arrived a day earlier than expected.

Summarize multiple product reviews

In [9]:

```
review_1 = prod_review

# review for a standing lamp
review_2 = """
Needed a nice lamp for my bedroom, and this one \
had additional storage and not too high of a price \
point. Got it fast - arrived in 2 days. The string \
to the lamp broke during the transit and the company \
happily sent over a new one. Came within a few days \
as well. It was easy to put together. Then I had a \
missing part, so I contacted their support and they \
very quickly got me the missing piece! Seems to me \
to be a great company that cares about their customers \
and products.
"""

# review for an electric toothbrush
review_3 = """
My dental hygienist recommended an electric toothbrush, \
which is why I got this. The battery life seems to be \
pretty impressive so far. After initial charging and \
leaving the charger plugged in for the first week to \
condition the battery, I've unplugged the charger and \
been using it for twice daily brushing for the last \
3 weeks all on the same charge. But the toothbrush head \
is too small. I've seen baby toothbrushes bigger than \
this one. I wish the head was bigger with different \
length bristles to get between teeth better because \
this one doesn't. Overall if you can get this one \
around the $50 mark, it's a good deal. The manufactuer's \
replacements heads are pretty expensive, but you can \
get generic ones that're more reasonably priced. This \
toothbrush makes me feel like I've been to the dentist \
every day. My teeth feel sparkly clean!
"""

# review for a blender
review_4 = """
So, they still had the 17 piece system on seasonal \
sale for around $49 in the month of November, about \
half off, but for some reason (call it price gouging) \
around the second week of December the prices all went \
up to about anywhere from between $70-$89 for the same \
system. And the 11 piece system went up around $10 or \
so in price also from the earlier sale price of $29. \
So it looks okay, but if you look at the base, the part \
where the blade locks into place doesn't look as good \
as in previous editions from a few years ago, but I \
plan to be very gentle with it (example, I crush \
very hard items like beans, ice, rice, etc. in the \
blender first then pulverize them in the serving size \
I want in the blender then switch to the whipping \
blade for a finer flour, and use the cross cutting blade \
first when making smoothies, then use the flat blade \
if I need them finer/less pulpy). Special tip when making \
smoothies, finely cut and freeze the fruits and \
vegetables (if using spinach-lightly stew soften the \
spinach then freeze until ready for use-and if making \
```

```
sorbet, use a small to medium sized food processor) \
that you plan to use that way you can avoid adding so \
much ice if at all-when making your smoothie. \
After about a year, the motor was making a funny noise. \
I called customer service but the warranty expired \
already, so I had to buy another one. FYI: The overall \
quality has gone down in these types of products, so \
they are kind of counting on brand recognition and \
consumer loyalty to maintain sales. Got it in about \
two days.
"""
```

```
reviews = [review_1, review_2, review_3, review_4]
```

In [10]:

```
for i in range(len(reviews)):
    prompt = f"""
    Your task is to generate a short summary of a product \
    review from an ecommerce site.

    Summarize the review below, delimited by triple \
    backticks in at most 20 words.

    Review: ```{reviews[i]}```
    """

    response = get_completion(prompt)
    print(i, response, "\n")
```

0 Soft and cute panda plush toy loved by daughter, but a bit small for the price. Arrived early.

1 Affordable lamp with storage, fast shipping, and excellent customer service. Easy to assemble and missing parts were quickly replaced.

2 Good battery life, small toothbrush head, but effective cleaning. Good deal if bought around \$50.

3 The product was on sale for \$49 in November, but the price increased to \$70-\$89 in December. The base doesn't look as good as previous editions, but the reviewer plans to be gentle with it. A special tip for making smoothies is to freeze the fruits and vegetables beforehand. The motor made a funny noise after a year, and the warranty had expired. Overall quality has decreased.

Try experimenting on your own!

In [11]:

```
for i in range(len(reviews)):
    prompt = f"""
    Your task is to extract relevant information of a product \
    review from an ecommerce site.

    extract relevant information from the review below, delimited by triple \
    backticks in at most 20 words.

    Review: ```{reviews[i]}```
    """

    response = get_completion(prompt)
    print(i, response, "\n")
```

0 Product: Panda plush toy
Pros: Soft, super cute, friendly face, arrived a day earlier than expected
Cons: A bit small for the price, other options might be bigger for the same price

1 Product: Lamp with additional storage.
Shipping: Arrived in 2 days.
Customer Service: Company sent a new string and missing part quickly.
Overall impression: Great company that cares about customers and products.

2 Product: Electric toothbrush
Pros: Impressive battery life, good deal at \$50
Cons: Small toothbrush head, expensive manufacturer replacement heads
Overall: Makes teeth feel sparkly clean, recommended by dental hygienist

3 Product: 17 piece system blender. Price: \$49 on seasonal sale in November, increased to \$70-\$89 in December. Base doesn't look as good as previous editions. Special tip for making smoothies. Motor made funny noise after a year, warranty expired. Overall quality has gone down.

In []: