

Iterative Prompt Development

In this lesson, you'll iteratively analyze and refine your prompts to generate marketing copy from a product fact sheet.

Setup

```
In [1]: 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 [2]: def get_completion(prompt, model="gpt-3.5-turbo"):
    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 out
    )
    return response.choices[0].message["content"]
```

Generate a marketing product description from a product fact sheet

```
In [3]: fact_sheet_chair = """
OVERVIEW
- Part of a beautiful family of mid-century inspired office furniture,
including filing cabinets, desks, bookcases, meeting tables, and more.
- Several options of shell color and base finishes.
- Available with plastic back and front upholstery (SWC-100)
or full upholstery (SWC-110) in 10 fabric and 6 leather options.
- Base finish options are: stainless steel, matte black,
gloss white, or chrome.
- Chair is available with or without armrests.
- Suitable for home or business settings.
- Qualified for contract use.

CONSTRUCTION
- 5-wheel plastic coated aluminum base.
- Pneumatic chair adjust for easy raise/lower action.

DIMENSIONS
- WIDTH 53 CM | 20.87"
- DEPTH 51 CM | 20.08"
- HEIGHT 80 CM | 31.50"
- SEAT HEIGHT 44 CM | 17.32"
- SEAT DEPTH 41 CM | 16.14"

OPTIONS
- Soft or hard-floor caster options.
- Two choices of seat foam densities:
medium (1.8 lb/ft3) or high (2.8 lb/ft3)
- Armless or 8 position PU armrests

MATERIALS
SHELL BASE GLIDER
- Cast Aluminum with modified nylon PA6/PA66 coating.
- Shell thickness: 10 mm.
SEAT
- HD36 foam

COUNTRY OF ORIGIN
- Italy
"""
```

```
In [4]: prompt = f"""
Your task is to help a marketing team create a
description for a retail website of a product based
on a technical fact sheet.

Write a product description based on the information
provided in the technical specifications delimited by
triple backticks.

Technical specifications: ```{fact_sheet_chain}```
"""
response = get_completion(prompt)
print(response)
```

Introducing our stunning mid-century inspired office chair, the perfect addition to any home or business setting. This chair is part of a beautiful family of office furniture, including filing cabinets, desks, bookcases, meeting tables, and more, all designed with a timeless mid-century aesthetic.

One of the standout features of this chair is the variety of options available. You can choose from several shell colors and base finishes to perfectly match your existing decor. The chair is available with either plastic back and front upholstery or full upholstery, giving you the freedom to customize the look and feel of your chair. With 10 fabric and 6 leather options to choose from, you can create a chair that truly reflects your personal style.

The base finish options are stainless steel, matte black, gloss white, or chrome, allowing you to further personalize your chair. You also have the choice of having armrests or opting for an armless design, depending on your preference.

Constructed with durability and comfort in mind, this chair features a 5-wheel plastic coated aluminum base for stability and mobility. The pneumatic chair adjust allows for easy raise and lower action, ensuring that you can find the perfect height for your workspace.

In terms of dimensions, this chair measures 53 cm in width, 51 cm in depth, and 80 cm in height. The seat height is 44 cm, and the seat depth is 41 cm, providing ample space for comfortable seating.

We understand that every workspace is unique, which is why we offer a range of options to suit your specific needs. You can choose between soft or hard-floor caster options, depending on the type of flooring in your workspace. Additionally, you have the choice of two seat foam densities: medium (1.8 lb/ft³) or high (2.8 lb/ft³), allowing you to select the level of support that is most comfortable for you. The chair also comes with the option of armless or 8 position PU armrests, providing additional versatility.

When it comes to materials, this chair is crafted with the utmost attention to quality. The shell base glider is made from cast aluminum with a modified nylon PA6/PA66 coating, ensuring durability and longevity. The shell thickness is 10 mm, adding to the chair's sturdiness. The seat is made with HD36 foam, providing a comfortable and supportive seating experience.

Finally, this chair is proudly made in Italy, known for its exceptional craftsmanship and design. With its combination of style, functionality, and customization options, this mid-century inspired office chair is the perfect choice for those seeking a timeless and elegant addition to their workspace.

Issue 1: The text is too long

- Limit the number of words/sentences/characters.

```
In [5]: prompt = f"""
Your task is to help a marketing team create a
description for a retail website of a product based
on a technical fact sheet.

Write a product description based on the information
provided in the technical specifications delimited by
triple backticks.

Use at most 50 words.

Technical specifications: ```{fact_sheet_chair}```
"""
response = get_completion(prompt)
print(response)
```

Introducing our mid-century inspired office chair, part of a stunning furniture collection. With various color and finish options, choose between plastic or full upholstery in fabric or leather. The chair features a durable aluminum base with 5 wheels and pneumatic height adjustment. Perfect for home or business use. Made in Italy.

```
In [6]: len(response)
```

333

Issue 2. Text focuses on the wrong details

- Ask it to focus on the aspects that are relevant to the intended audience.

```
In [7]: prompt = f"""
Your task is to help a marketing team create a
description for a retail website of a product based
on a technical fact sheet.

Write a product description based on the information
provided in the technical specifications delimited by
triple backticks.

The description is intended for furniture retailers,
so should be technical in nature and focus on the
materials the product is constructed from.

Use at most 50 words.

Technical specifications: ```{fact_sheet_chair}```
"""
response = get_completion(prompt)
print(response)
```

Introducing our mid-century inspired office chair, part of a beautiful furniture collection. With various shell colors and base finishes, it offers versatility for any setting. Choose between plastic or full upholstery in a range of fabric and leather options. The chair features a durable aluminum base and pneumatic chair adjustment for easy height customization. Made in Italy.

```
In [8]: prompt = f"""
Your task is to help a marketing team create a
description for a retail website of a product based
on a technical fact sheet.

Write a product description based on the information
provided in the technical specifications delimited by
triple backticks.

The description is intended for furniture retailers,
so should be technical in nature and focus on the
materials the product is constructed from.

At the end of the description, include every 7-character
Product ID in the technical specification.

Use at most 50 words.

Technical specifications: ```{fact_sheet_chair}```
"""
response = get_completion(prompt)
print(response)
```

Introducing our mid-century inspired office chair, part of a beautiful family of furniture. With various shell colors and base finishes, this chair offers versatility and style. Choose between plastic or full upholstery in a range of fabric and leather options. The chair features a 5-wheel plastic coated aluminum base and a pneumatic chair adjust for easy height adjustment. Available with or without armrests, this chair is suitable for both home and business settings. Made with high-quality materials, including a cast aluminum shell with a modified nylon coating and HD36 foam seat, this chair is built to last. Made in Italy.

Product IDs: SWC-100, SWC-110

Issue 3. Description needs a table of dimensions

- Ask it to extract information and organize it in a table.

```
In [9]: prompt = f"""
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Write a product description based on the information
provided in the technical specifications delimited by
triple backticks.

The description is intended for furniture retailers,
so should be technical in nature and focus on the
materials the product is constructed from.

At the end of the description, include every 7-character
Product ID in the technical specification.

After the description, include a table that gives the
product's dimensions. The table should have two columns.
In the first column include the name of the dimension.
In the second column include the measurements in inches only.

Give the table the title 'Product Dimensions'.

Format everything as HTML that can be used in a website.
Place the description in a <div> element.

Technical specifications: ```{fact_sheet_chair}```
"""

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



```
<div>
  <h2>Product Description</h2>
  <p>
    Introducing our latest addition to our mid-century inspired office furniture collection - the SWC Chair. This chair is part of a beautiful family of furniture that includes filing cabinets, desks, bookcases, meeting tables, and more. With its sleek design and customizable options, the SWC Chair is the perfect choice for any home or business setting.
  </p>
  <p>
    The SWC Chair offers several options for customization. You can choose from a variety of shell colors and base finishes to match your existing decor. The chair is available with plastic back and front upholstery or full upholstery in a range of fabric and leather options. The base finish options include stainless steel, matte black, gloss white, or chrome. You can also choose whether to have armrests or not, depending on your preference.
  </p>
  <p>
    The construction of the SWC Chair is top-notch. It features a 5-wheel plastic coated aluminum base, ensuring stability and durability. The chair also has a pneumatic adjuster, allowing for easy raise and lower action. This makes it convenient for users to find their desired height and maintain proper posture throughout the day.
  </p>
  <p>
    The SWC Chair is designed with comfort in mind. The seat is made with HD36 foam, providing a plush and supportive cushioning experience. You can also choose between soft or hard-floor caster options, depending on the type of flooring in your space. Additionally, there are two choices of seat foam densities available: medium (1.8 lb/ft3) or high (2.8 lb/ft3). This allows you to customize the level of firmness to suit your preferences.
  </p>
  <p>
    The SWC Chair is not only stylish and comfortable, but it is also built to last. The shell base glider is made of cast aluminum with a modified nylon PA6/PA66 coating, ensuring strength and durability. The shell has a thickness of 10 mm, providing stability and support. With its high-quality materials and construction, the SWC Chair is qualified for contract use, making it suitable for commercial settings as well.
  </p>
  <p>
    Made in Italy, the SWC Chair is a testament to Italian craftsmanship and design. It combines style, functionality, and durability to create a chair that is both aesthetically pleasing and practical.
  </p>
  <h2>Product Dimensions</h2>
  <table>
    <tr>
      <th>Dimension</th>
      <th>Measurement (inches)</th>
    </tr>
    <tr>
      <td>Width</td>
      <td>20.87"</td>
    </tr>
    <tr>
      <td>Depth</td>
```

```
<td>20.08"</td>
</tr>
<tr>
  <td>Height</td>
  <td>31.50"</td>
</tr>
<tr>
  <td>Seat Height</td>
  <td>17.32"</td>
</tr>
<tr>
  <td>Seat Depth</td>
  <td>16.14"</td>
</tr>
</table>
</div>
```

Product IDs: SWC-100, SWC-110

Load Python libraries to view HTML

```
In [10]: from IPython.display import display, HTML
```

```
In [11]: display(HTML(response))
```

Product Description

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Made in Italy, the SWC Chair is a testament to Italian craftsmanship and design. It combines style, functionality, and durability to create a chair that is both aesthetically pleasing and practical.

Product Dimensions

Dimension	Measurement (inches)
Width	20.87"
Depth	20.08"
Height	31.50"
Seat Height	17.32"
Seat Depth	16.14"
Product IDs: SWC-100, SWC-110	

Try experimenting on your own!

In []: