Iterative Prompt Development

In this lesson, you'll iteratively analyze and refine your prompts to generate marketing copy from a product fac
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 mode
            )
            return response.choices[0].message["content"]
```

Note: In June 2023, OpenAI updated gpt-3.5-turbo. The results you see in the notebook may be slightly
different than those in the video. Some of the prompts have also been slightly modified to product the desired
results.

Generate a marketing product description from a product fact sheet

```
In [3]: act_sheet_chair = """
        VERVIEW
         Part of a beautiful family of mid-century inspired office furniture,
        ncluding 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)
        r full upholstery (SWC-110) in 10 fabric and 6 leather options.
         Base finish options are: stainless steel, matte black,
        loss white, or chrome.
         Chair is available with or without armrests.
         Suitable for home or business settings.
         Qualified for contract use.

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

        IMENSIONS
         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"

        PTIONS
         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

        ATERIALS
        HELL BASE GLIDER
         Cast Aluminum with modified nylon PA6/PA66 coating.
         Shell thickness: 10 mm.
        EAT
         HD36 foam

        OUNTRY OF ORIGIN
         Italy
        """
```

```python
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_chair}```
        """
        response = get_completion(prompt)
        print(response)
```

Introducing our stylish and versatile mid-century inspired office chair, perfect for both home and business settings. This chair is part of a beautiful family of office furniture that includes filing cabinets, desks, bookcases, meeting tables, and more.

Customize your chair with several options of shell color and base finishes to suit your personal style. Choose between plastic back and front upholstery or full upholstery in a variety of fabric and leather options. The chair is also available with or without armrests.

Constructed with a durable 5-wheel plastic coated aluminum base and featuring a pneumatic chair adjust for easy raise/lower action, this chair is both functional and comfortable. The dimensions of the chair are as follows: 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".

Choose between soft or hard-floor caster options and two choices of seat foam densities: medium or high. The chair is also available with armless or 8 position PU armrests.

Made with high-quality materials, including a cast aluminum shell with modified nylon coating and HD36 foam seat, this chair is built to last. Plus, it is qualified for contract use and proudly made in Italy.

Elevate your workspace with our stylish and functional mid-century inspired office chair.

Issue 1: The text is too long

- Limit the number of words/sentences/characters.

In [5]:
```python
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 versatile and stylish office chair from Italy. With cu
stomizable options in color, upholstery, and base finish, this mid-cen
tury inspired chair is perfect for both home and business settings. Fe
aturing a durable construction and ergonomic design, it's the ideal ch
oice for any workspace.

In [6]:
```python
len(response.split())
```

44

Issue 2. Text focuses on the wrong details

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

```python
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 versatile and stylish office chair, part of a mid-century inspired furniture collection. Constructed with a durable cast aluminum shell and base glider coated with modified nylon PA6/PA66. The seat features high-density HD36 foam for ultimate comfort. Made in Italy, suitable for both home and business use.

In [10]:
```python
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 versatile and stylish office chair, part of a mid-century inspired furniture collection. Choose from a variety of shell colors and base finishes to suit your space. Constructed with a durable aluminum base and high-density foam seat for comfort. Perfect for home or business use.

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 [12]:
```python
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.
```

```
        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)
```

```html
<div>
<p>This mid-century inspired office chair is a perfect addition to any
workspace, whether at home or in a business setting. The chair feature
s a 5-wheel plastic coated aluminum base for stability and mobility. T
he pneumatic chair adjustment allows for easy raise and lower action,
ensuring comfort throughout the day.</p>

<p>You can customize this chair to your liking with options for shell
color, base finish, and upholstery material. Choose between plastic ba
ck and front upholstery or full upholstery in a variety of fabric and
leather options. The base finish options include stainless steel, matt
e black, gloss white, or chrome. You also have the choice of adding ar
mrests or keeping the chair armless.</p>

<p>Constructed with high-quality materials, the shell base glider is m
ade of cast aluminum with a modified nylon PA6/PA66 coating, providing
durability and style. The seat is filled with HD36 foam for ultimate c
omfort and support.</p>

<p>Product ID: SWC-100</p>
</div>

<table>
  <caption>Product Dimensions</caption>
  <tr>
    <th>Dimension</th>
    <th>Measurements</th>
  </tr>
  <tr>
    <td>Width</td>
    <td>20.87 inches</td>
  </tr>
  <tr>
    <td>Depth</td>
    <td>20.08 inches</td>
  </tr>
  <tr>
```

```
      <td>Height</td>
      <td>31.50 inches</td>
    </tr>
    <tr>
      <td>Seat Height</td>
      <td>17.32 inches</td>
    </tr>
    <tr>
      <td>Seat Depth</td>
      <td>16.14 inches</td>
    </tr>
</table>
```

Load Python libraries to view HTML

```
In [13]:  from IPython.display import display, HTML
```

```
In [14]:  display(HTML(response))
```

This mid-century inspired office chair is a perfect addition to any workspace, whether at home or in a business setting. The chair features a 5-wheel plastic coated aluminum base for stability and mobility. The pneumatic chair adjustment allows for easy raise and lower action, ensuring comfort throughout the day.

You can customize this chair to your liking with options for shell color, base finish, and upholstery material. Choose between plastic back and front upholstery or full upholstery in a variety of fabric and leather options. The base finish options include stainless steel, matte black, gloss white, or chrome. You also have the choice of adding armrests or keeping the chair armless.

Constructed with high-quality materials, the shell base glider is made of cast aluminum with a modified nylon PA6/PA66 coating, providing durability and style. The seat is filled with HD36 foam for ultimate comfort and support.

Product ID: SWC-100

Product Dimensions

Dimension	Measurements
Width	20.87 inches
Depth	20.08 inches
Height	31.50 inches
Seat Height	17.32 inches
Seat Depth	16.14 inches