00-Groq.com API starter code

In this notebook, we will make API calls to Groq.com to summarize an article.

We would use Mixtral 8x7B as it has very good performance scores, and it's open source.

In [1]:
```
# !pip install groq
```

In [2]:
```
# load api key
import json
import urllib.parse

with open('./data/credentials.json') as f:
    login = json.load(f)

api_key = login["GROQ_API_KEY"]
print(len(api_key))
```

```
56
```

In [3]:
```
from groq import Groq

client = Groq(
    api_key=api_key, # put your api key here, or in "./data/credentials.json"
)
```

In [4]:
```
completion = client.chat.completions.create(
    model="mixtral-8x7b-32768",
    messages=[
        {
            "role": "user",
            "content": "Answer in 1 sentence: What's the capital city of Alberta?"
        },
    ],
    temperature=1,
    max_tokens=1024,
    top_p=1,
    stream=True,
    stop=None,
)

for chunk in completion:
    print(chunk.choices[0].delta.content or "", end="")
```

```
The capital city of Alberta, one of Canada's provinces, is Edmonton.
```

In [5]:
```
# test some summarization
s = 'The evolutionary origins of the hypoxia-sensitive cells that trigger amniote r
s
```

Out[5]:
```
'The evolutionary origins of the hypoxia-sensitive cells that trigger amniote resp
iratory reflexes – carotid body glomus cells , and ‘pulmonary neuroendocrine cell
s’ ( PNECs ) - are obscure . Homology has been proposed between glomus cells , whi
ch are neural crest-derived , and the hypoxia-sensitive ‘neuroepithelial cells’ (
NECs ) of fish gills , whose embryonic origin is unknown . NECs have also been lik
ened to PNECs , which differentiate in situ within lung airway epithelia . Using g
enetic lineage-tracing and neural crest-deficient mutants in zebrafish , and physi
cal fate-mapping in frog and lamprey , we find that NECs are not neural crest-deri
ved , but endoderm-derived , like PNECs , whose endodermal origin we confirm . We
discover neural crest-derived catecholaminergic cells associated with zebrafish ph
aryngeal arch blood vessels , and propose a new model for amniote hypoxia-sensitiv
e cell evolution: endoderm-derived NECs were retained as PNECs , while the carotid
body evolved via the aggregation of neural crest-derived catecholaminergic ( chrom
affin ) cells already associated with blood vessels in anamniote pharyngeal arches
. '
```

In [6]:
```
prompt = f"[INST] Simplify and summarize in 200 to 300 words:  {s} [/INST]"
```

In [7]:
```
# test pause
import time
print("Hello")
time.sleep(2)
print("World")
```

```
Hello
World
```

In [8]:
```
SLEEP_TIME = 10 # pause between requests
```

In [11]:
```
# put into a function
def send_sumarize_request(content, model=client, min_words=250, max_words=500, quie
    """
        summarize the content
        input: context (text), model (groq_api client), max_words (int)
        output: summarized text
    """
    if not quiet:
        print("Sending request for text =", content[:100])

    result = ""
    prompt = f'Simplify and summarize in minimum {min_words} to maximum {max_words}
    try:
        completion = client.chat.completions.create(
            model="mixtral-8x7b-32768",
            messages=[
                {
                    "role": "user",
                    "content": prompt
                },
            ],
            temperature=1,
            max_tokens=2048,
            top_p=1,
            stream=True,
            stop=None,
        )
```

```
        for chunk in completion:
            result += chunk.choices[0].delta.content or ""
    except Exception as err:
        print("Skipping, error : ", err)
        result = ""


    # pause to avoid hitting bandwidth limit (~ 14K token / minute)
    print(f"Pausing for {SLEEP_TIME} secs...", end="")
    time.sleep(SLEEP_TIME)
    print("OK")

    return result
```

In [12]:
```
send_sumarize_request(s)
```

```
Pausing for 10 secs...OK
```

Out[12]:
```
'The evolutionary origins of hypoxia-sensitive cells that trigger amniote respirat
ory reflexes, specifically carotid body glomus cells and pulmonary neuroendocrine
cells (PNECs), remain unclear. While glomus cells are neural crest-derived, it has
been suggested that they share a common ancestry with hypoxia-sensitive neuroepith
elial cells (NECs) found in fish gills, whose embryonic origin is unknown. NECs ha
ve also been compared to PNECs, which differentiate directly within lung airway ep
ithelia. However, through genetic lineage-tracing, the use of neural crest-deficie
nt mutants in zebrafish, and physical fate-mapping in frog and lamprey, a new stud
y has found that NECs are not neural crest-derived, but rather, endoderm-derived,
similar to PNECs. Additionally, the study confirmed the endodermal origin of PNEC
s. The researchers also discovered neural crest-derived catecholaminergic cells as
sociated with blood vessels in zebrafish pharyngeal arches and proposed a new mode
l for the evolution of amniote hypoxia-sensitive cells. According to this model, e
ndoderm-derived NECs were retained as PNECs, while the carotid body developed via
the aggregation of neural crest-derived catecholaminergic (chromaffin) cells that
were already associated with blood vessels in anamniote pharyngeal arches.'
```

In [ ]:
```

```