MET CS688

Web Analytics and Mining

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Open AI

OPENAI

OPENAI IS AN AI RESEARCH AND DEPLOYMENT COMPANY IN THE FIELD OF ARTIFICIAL GENERAL INTELLIGENCE (AGI)—CREATING HIGHLY AUTONOMOUS SYSTEMS THAT OUTPERFORM HUMANS AT MOST ECONOMICALLY VALUABLE WORK.

Link: https://beta.openai.com/overview

OPENAI APPS

Start with the basics

Quickstart tutorial	Examples
Learn by building a quick sample app	Explore some example tasks

Build an application

> ⊘ **We no longer require you to register your applications with OpenAI.**   Learn more   ✕

Text completion
Generate and edit text

Code completion Limited beta
Generate, edit, and explain code

Image generation Beta
Generate and edit images

Fine-tuning
Train a model for your use case

Embeddings
Search, classify, and compare text

Link: https://beta.openai.com/overview

TEXT COMPLETION & MANIPULATION

COMPLETION:

"WRITE A TAGLINE FOR AN ICE CREAM SHOP."

- "WE SERVE UP SMILES WITH EVERY SCOOP!"

CLASSIFICATION

CLASSIFY WHETHER A TWEET'S SENTIMENT IS POSITIVE, NEUTRAL, OR NEGATIVE.

- 1. "I CAN'T STAND HOMEWORK"
- 2. "THIS SUCKS. I'M BORED ☹"
- 3. "I CAN'T WAIT FOR HALLOWEEN!!!"
- 4. "MY CAT IS ADORABLE 🖤🖤"
- 5. "I HATE CHOCOLATE"

GENERATION - ONE OF THE MOST POWERFUL TASKS IS GENERATING NEW IDEAS OR VERSIONS OF INPUT TEXT.

- 1. VIRTUAL REALITY GROUP FITNESS CLASSES
- 2. VR-ENABLED PERSONAL TRAINER SESSIONS
- 3. FITNESS VIDEO GAMES WITH VIRTUAL REALITY IMMERSION

CHAT GPT

ChatGPT: Optimizing Language Models for Dialogue

We've trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible for ChatGPT to answer followup questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests. ChatGPT is a sibling model to InstructGPT, which is trained to follow an instruction in a prompt and provide a detailed response.

November 30, 2022
13 minute read

Link: https://beta.openai.com/playground/p/default-tweet-classifier

OPENAI PLAYGROUND

Playground

Load a preset...   Save   View code   Share   ...

Decide whether a Tweet's sentiment is positive, neutral, or negative.

Tweet: "I loved the new Batman movie!"
Sentiment:

Mode

Model

text-davinci-003

Temperature   0

Maximum length   60

Stop sequences
Enter sequence and press Tab

Top P   1

Frequency penalty   0.5

Presence penalty   0

Best of   1

Inject start text

Submit   31

What is the GPT-3 API?

- The GPT-3 API is a machine learning platform that enables developers to train and deploy large language AI models.

- It provides a simple, yet powerful, way to build and customize models for any purpose.

- The GPT-3 API is also easy to use, making it accessible to anyone with basic coding skills.

- Integrating GPT-3 API and Python you can create extremely powerful sophisticated software applications.

- Wrapping the Python code into an open-source app framework such as Streamlit helps create interactive web apps in a short time.

GPT3 Integration with Python

Requirements: Have an OpenAI account with an API key. Then install the OpenAI API (pip install openai)
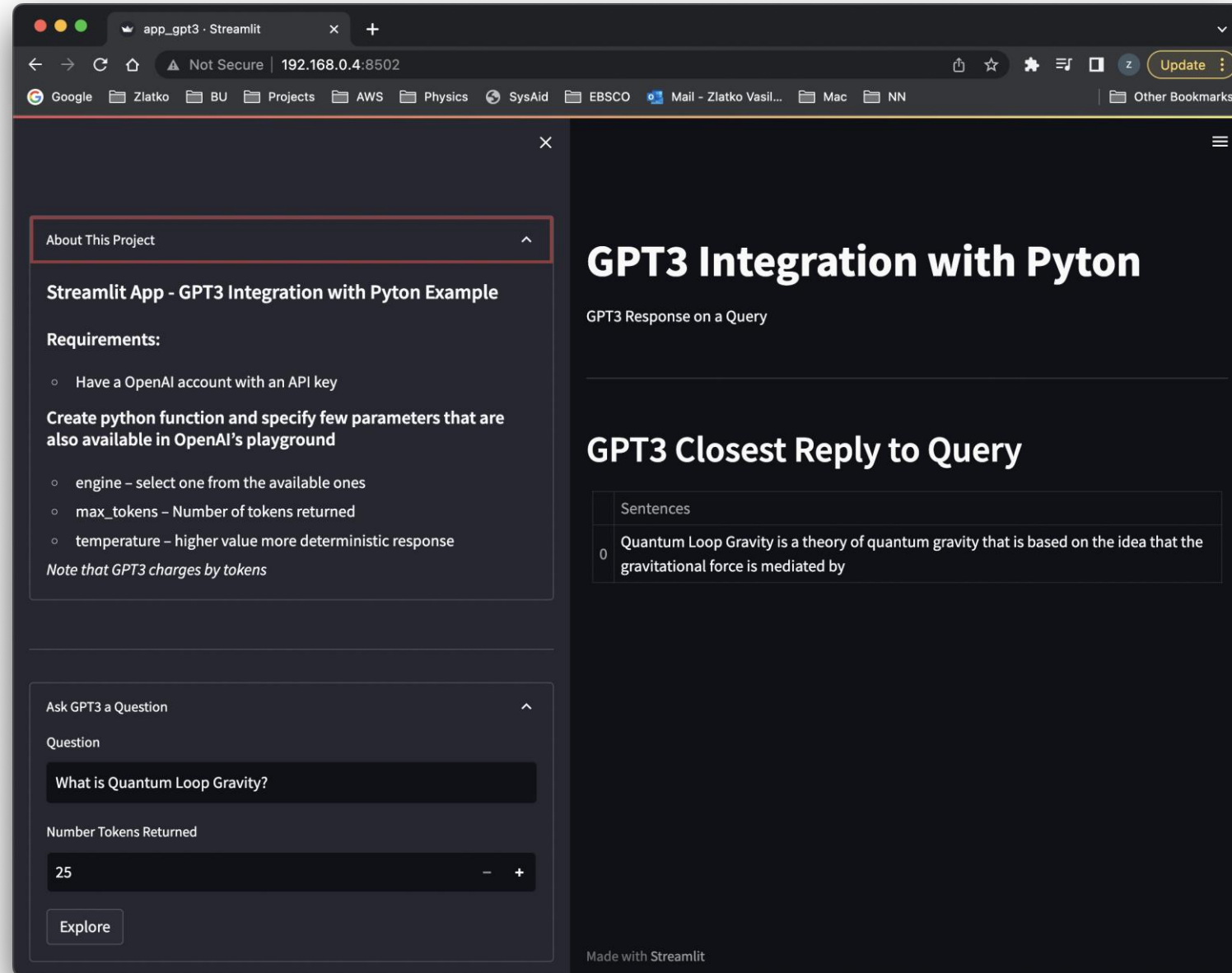
- Create python function and specify few parameters that are also available in OpenAI's playground
  - Engine – select one from the available ones
  - Max_tokens – Number of tokens returned (GPT3 charges by tokens)
  - Temperature – higher value more deterministic response

```python
"""
    GPT3 Integration with Pyton Example
"""
import openai


def gpt3(query, my_key):
    openai.api_key = my_key
    response = openai.Completion.create(
        engine="davinci-instruct-beta",
        prompt=query,
        temperature=0.1,
        max_tokens=1000,
        top_p=1,
        frequency_penalty=0,
        presence_penalty=0
    )
    content = response.choices[0].text.split(".")
    print(content)
    return response.choices[0].text
```

From clipboard | 🔒 Editor

Max_tokens —

Quantum Loop Gravity is a theory of quantum gravity that is based on the idea that the gravitational field is quantized.

What is the difference between Quantum Loop Gravity and Loop Quantum Gravity?

Loop Quantum Gravity is a theory of quantum gravity that is based on the idea that the gravitational field is quantized.

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GPT3 Integration with Python as Streamlit App

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The Code

1. GPT3 code

2. Streamlit Sidebar

3. Main Panel with the returned result

```python
def gpt3(query, num_tokens, my_key):
    openai.api_key = my_key
    response = openai.Completion.create(
        engine="davinci-instruct-beta",
        prompt=query,
        temperature=0.1,
        max_tokens=num_tokens,
        top_p=1,
        frequency_penalty=0,
        presence_penalty=0
    )
    content = response.choices[0].text.split(".")
    # print(content)
    return response.choices[0].text
```

1

```python
with st.sidebar:
    with st.expander("About This Project"):
        st.header('Streamlit App - GPT Integration with Python Example')
        st.subheader('Requirements: ')
        st.markdown("""
        - Have a OpenAI account with an API key
        """)
        st.subheader('Create python function and specify few parameters that are also available in OpenAI's playground')
        st.markdown("""
        - engine - select one from the available ones
        - max_tokens - Number of tokens returned
        - temperature - higher value more deterministic response
        """)
        st.markdown('*Note that GPT3 charges by tokens*')

    st.markdown("""---""")
    with st.expander("Ask GPT a Question"):
        query = st.text_input("Question", "What is Quantum Loop Gravity?")
        num_tokens = st.number_input('Number Tokens Returned', 25)
        submitted = st.button("Explore")
```

2

```python
st.title('GPT Integration with Pyton')
st.markdown("""
    GPT3 Response on a Query
    """)
st.markdown("""---""")

st.header('GPT3 Closest Reply to Query')

with open("data/my_key.txt", mode='r', encoding='utf8') as f:
    my_key = f.readlines()[0]  # Read Saved OpenAI Key

if submitted:
    with st.spinner('Wait for response ..'):
        response = gpt3(query, num_tokens, my_key)

        res1 = response.split('\n')  # Turn text into list and dataframe
        result = []; cc = 0
        for sent in res1:
            if sent != "" and cc < 1:
                result.append(sent)
                cc += 1

        df = pd.DataFrame(result, columns=(['Sentences']))

    st.table(df)
```

3

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