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# -*- coding: utf-8 -*-
"""Untitled0.ipynb

Automatically generated by Colaboratory.

Original file is located at
https://colab.research.google.com/drive/1UkaqyozC4Ruuw7YIrHc\_Su2NCml0QupR
"""

import torch
from transformers import GPT2LMHeadModel, GPT2Tokenizer

class TextGenerator:
    def __init__(self, model_name="gpt2-medium"):
        self.tokenizer = GPT2Tokenizer.from_pretrained(model_name)
        self.model = GPT2LMHeadModel.from_pretrained(model_name)
        self.device = torch.device("cuda" if torch.cuda.is_available() else "cpu")
        self.model.to(self.device)

    def generate_text(self, prompt, max_length=100, temperature=0.7, top_p=0.9, top_k=None, num_sentences=5):
        input_ids = self.tokenizer.encode(prompt, return_tensors="pt").to(self.device)
        text = ""
        for _ in range(num_sentences):
            output = self.model.generate(
                input_ids=input_ids,
                max_length=max_length + len(input_ids[0]),
                temperature=temperature,
                top_p=top_p,
                top_k=top_k,
                pad_token_id=self.tokenizer.eos_token_id
            )
            generated_sentence = self.tokenizer.decode(output[0], skip_special_tokens=True)
            text += generated_sentence + " "
            input_ids = self.tokenizer.encode(generated_sentence, return_tensors="pt").to(self.device)
        return text.strip()

def main():
    try:
        generator = TextGenerator()
        prompt = "Once upon a time, there was a beautiful princess who lived in a castle."
        generated_text = generator.generate_text(prompt, max_length=50, temperature=0.7, top_p=0.9, top_k=50, num_sentences=5)
        print("Generated text:")
        print(generated_text)
    except Exception as e:
        print(f"An error occurred: {str(e)}")

if __name__ == "__main__":
    main()

```