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SECTION: F

MINI PROJECT UNIT 1:

PROBLEM STATEMENT:

Joke Punchline Generator

Goal: Input a setup ("Why did the chicken cross the road?") and let the AI finish it.

Tech: Text generation.

ABSTRACT:

This project implements a joke punchline generator using hugging Face's text generation pipeline. It continues the joke started by the user. It demonstrates how transformer based language models can be used for creative text generation tasks. It also highlights the limitations of base language models.

DOCUMENTATION:

I used the Hugging face transformers library to build a simple text generation system. GPT-2 model was loaded using pipeline ("text-generation") API which allowed for continuous text outputs based on the users input (prompt).

This approach was chosen because GPT-2 is a lightweight, pre-trained model that demonstrates the fundamentals of text generation. Although the model does not actually understand humor and may not produce perfect jokes as seen, it shows how language models generate text by predicting the next words in a sequence.

OUTPUT SCREENSHOTS:

```
▶ joke_setup = input("Enter a joke starter: ").strip()

output = generator(
    joke_setup,
    max_new_tokens=20,
    do_sample=True,
    temperature=0.8,
    truncation=True
)

print("\nJoke:")
print(joke_setup)
print(output[0]["generated_text"][len(joke_setup):].strip())

...
... Enter a joke starter: why did the man cry
Setting `pad_token_id` to `eos_token_id`:50256 for open-end generation.

Joke:
why did the man cry
for help after he took a shot at someone in the face at a party?"
```

```
▶ joke_setup = input("Enter a joke starter: ").strip()

output = generator(
    joke_setup,
    max_new_tokens=20,
    do_sample=True,
    temperature=0.3,
    truncation=True
)

print("\nJoke:")
print(joke_setup)
print(output[0]["generated_text"][len(joke_setup):].strip())

...
... Enter a joke starter: tell me about the computer virus
Setting `pad_token_id` to `eos_token_id`:50256 for open-end generation.

Joke:
tell me about the computer virus
that infected your computer.

I have been infected with this virus. I have never been able
```

```
▶ joke_setup = input("Enter a joke starter: ").strip()

    output = generator(
        joke_setup,
        max_new_tokens=20,
        do_sample=True,
        temperature=0.8,
        truncation=True
    )

    print("\nJoke:")
    print(joke_setup)
    print(output[0]["generated_text"][len(joke_setup):].strip())
    |

... Enter a joke starter: why did the chicken cross the road?
Setting `pad_token_id` to `eos_token_id`:50256 for open-end generation.

Joke:
why did the chicken cross the road?
Did he use the car to get there? Did he drive off without a license?
```