

Project 55: SAT/GRE Vocabulary Practice Bot

Description:

This quiz-style bot helps users practice high-level vocabulary commonly found in the SAT, GRE, and other competitive exams. It generates questions like definitions, synonyms, antonyms, and sentence completions—ideal for students aiming to master academic words.

vocab_practice_bot.py

```
import openai
import os
import gradio as gr

# Load OpenAI API key
openai.api_key = os.getenv("OPENAI_API_KEY")

# Function to generate a vocabulary practice quiz
def vocab_practice(level, question_type):
    # Prompt to act like a test prep tutor
    messages = [
        {
            "role": "system",
            "content": (
                f"You are a test prep tutor helping students prepare for the {level} exam. "
                f"Create 3 vocabulary practice questions of type: {question_type}. "
                "Each question should have 4 answer options (A-D) and highlight the correct answer. "
                "Use advanced vocabulary relevant to the exam."
            )
        },
        {
            "role": "user",
            "content": "Generate quiz."
        }
    ]

    try:
        # Request practice questions from OpenAI
        response = openai.ChatCompletion.create(
```

```

        model="gpt-3.5-turbo",
        messages=messages
    )

    # Return quiz
    return response["choices"][0]["message"]["content"].strip()

except Exception as e:
    return f"Error: {str(e)}"

# Gradio UI
iface = gr.Interface(
    fn=vocab_practice,
    inputs=[
        gr.Radio(["SAT", "GRE"], label="Exam Level"),
        gr.Radio(["Definitions", "Synonyms", "Antonyms", "Fill in the Blank"],
    ],
    outputs="text",
    title="🎓 SAT/GRE Vocabulary Practice Bot",
    description="Choose your test and question type to practice high-level voc
)

# Launch the quiz bot
iface.launch()

```