# utils/api\_integrator.py

import openai

import json

import os

import logging

logger = logging.getLogger(\_\_name\_\_)

def send\_data\_for\_analysis(api\_key, data, analysis\_path):

logger.info("Sending simulation data to OpenAI for analysis.")

openai.api\_key = api\_key

try:

prompt = (

f"Here is the simulation data from the RISC-V pipeline:\n{json.dumps(data, indent=2)}\n"

f"Provide an analysis of the pipeline performance and suggest improvements."

)

response = openai.ChatCompletion.create(

model="gpt-3.5-turbo",

messages=[

{"role": "system", "content": "You are an AI assistant specialized in analyzing RISC-V processor pipelines."},

{"role": "user", "content": prompt}

],

max\_tokens=1000,

temperature=0.3,

)

analysis = response['choices'][0]['message']['content']

with open(analysis\_path, 'w') as analysis\_file:

analysis\_file.write(analysis)

logger.info(f"Analysis received from OpenAI and saved to {analysis\_path}")

except Exception as e:

logger.error(f"Error sending data to OpenAI API: {e}")

raise