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import os
import random

from dotenv import load_dotenv

from swarm_models import OpenAIChat
from swarm_models import StableDiffusion
from swarms.structs import Agent

load_dotenv()
openai_api_key = os.getenv("OPENAI_API_KEY")
stability_api_key = os.getenv("STABILITY_API_KEY")

# Initialize the language model and image generation model
llm = OpenAIChat(
    openai_api_key=openai_api_key, temperature=0.5, max_tokens=3000
)
sd_api = StableDiffusion(api_key=stability_api_key)


# Creative Concept Generator for Product Ads
class ProductAdConceptGenerator:
    def __init__(self, product_name):
        self.product_name = product_name
        self.themes = [
            "futuristic",
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    "rustic",
    "luxurious",
    "minimalistic",
    "vibrant",
    "elegant",
    "retro",
    "urban",
    "ethereal",
    "surreal",
    "artistic",
    "tech-savvy",
    "vintage",
    "natural",
    "sophisticated",
    "playful",
    "dynamic",
    "serene",
    "lasers,lightning",
]
self.contexts = [
    "in an everyday setting",
    "in a rave setting",
    "in an abstract environment",
    "in an adventurous context",
    "surrounded by nature",
    "in a high-tech setting",
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            "in a historical context",
            "in a busy urban scene",
            "in a tranquil and peaceful setting",
            "against a backdrop of city lights",
            "in a surreal dreamscape",
            "in a festive atmosphere",
            "in a luxurious setting",
            "in a playful and colorful background",
            "in an ice cave setting",
            "in a serene and calm landscape",
        ]
        self.contexts = [
            "high realism product ad (extremely creative)"
        ]

    def generate_concept(self):
        theme = random.choice(self.themes)
        context = random.choice(self.contexts)
        return (
            f"{theme} inside a {style} {self.product_name}, {context}"
        )


# User input
product_name = input(
    "Enter a product name for ad creation (e.g., 'PS5', 'AirPods',"
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    " 'Kirkland Vodka'): "
)

# Generate creative concept
concept_generator = ProductAdConceptGenerator(product_name)
creative_concept = concept_generator.generate_concept()

# Generate product image based on the creative concept
image_paths = sd_api.run(creative_concept)

# Generate ad copy
ad_copy_agent = Agent(llm=llm, max_loops=1)
ad_copy_prompt = (
    f"Write a compelling {social_media_platform} ad copy for a"
    f" product photo showing {product_name} {creative_concept}."
)
ad_copy = ad_copy_agent.run(task=ad_copy_prompt)

# Output the results
print("Creative Concept:", concept_result)
print("Design Ideas:", design_result)
print("Ad Copy:", copywriting_result)
print(
    "Image Path:",
    image_paths[0] if image_paths else "No image generated",
)
```