```
import os
from dotenv import load_dotenv
from swarms import Agent
from swarm_models import OpenAIChat
from swarms.structs.swarm_router import SwarmRouter

load_dotenv()

# Get the OpenAI API key from the environment variable
api_key = os.getenv("GROQ_API_KEY")

# Model
model = OpenAIChat(
    openai_api_base="https://api.groq.com/openai/v1",
    openai_api_key=api_key,
    model_name="llama-3.1-70b-versatile",
    temperature=0.1,
)


# Initialize specialized agents
data_extractor_agent = Agent(
    agent_name="Data-Extractor",
    system_prompt="You are a data extraction specialist. Extract relevant information from provided content.",
    llm=model,
    max_loops=1,
    autosave=True,
    verbose=True,
    dynamic_temperature_enabled=True,
    saved_state_path="data_extractor_agent.json",
    user_name="pe_firm",
    retry_attempts=1,
    context_length=200000,
    output_type="string",
)

summarizer_agent = Agent(
    agent_name="Document-Summarizer",
    system_prompt="You are a document summarization specialist. Provide clear and concise summaries.",
    llm=model,
    max_loops=1,
    autosave=True,
    verbose=True,
    dynamic_temperature_enabled=True,
    saved_state_path="summarizer_agent.json",
    user_name="pe_firm",
    retry_attempts=1,
    context_length=200000,
    output_type="string",
)
```

```
financial_analyst_agent = Agent(
    agent_name="Financial-Analyst",
    system_prompt="You are a financial analysis specialist. Analyze financial aspects of content.",
    llm=model,
    max_loops=1,
    autosave=True,
    verbose=True,
    dynamic_temperature_enabled=True,
    saved_state_path="financial_analyst_agent.json",
    user_name="pe_firm",
    retry_attempts=1,
    context_length=200000,
    output_type="string",
)

market_analyst_agent = Agent(
    agent_name="Market-Analyst",
    system_prompt="You are a market analysis specialist. Analyze market-related aspects.",
    llm=model,
    max_loops=1,
    autosave=True,
    verbose=True,
    dynamic_temperature_enabled=True,
    saved_state_path="market_analyst_agent.json",
    user_name="pe_firm",
    retry_attempts=1,
    context_length=200000,
    output_type="string",
)


operational_analyst_agent = Agent(
    agent_name="Operational-Analyst",
    system_prompt="You are an operational analysis specialist. Analyze operational aspects.",
    llm=model,
    max_loops=1,
    autosave=True,
    verbose=True,
    dynamic_temperature_enabled=True,
    saved_state_path="operational_analyst_agent.json",
    user_name="pe_firm",
    retry_attempts=1,
    context_length=200000,
    output_type="string",
)


# Initialize the SwarmRouter
router = SwarmRouter(
    name="pe-document-analysis-swarm",
    description="Analyze documents for private equity due diligence and investment decision-making",
    max_loops=1,
    agents=[
        data_extractor_agent,
        summarizer_agent,
        financial_analyst_agent,
        market_analyst_agent,
        operational_analyst_agent,
    ],
    swarm_type="SequentialWorkflow",  # or "SequentialWorkflow" or "ConcurrentWorkflow" or
    auto_generate_prompts=True,
    output_type="all",
)

# Example usage
if __name__ == "__main__":
    # Run a comprehensive private equity document analysis task
    result = router.run(
        "Where is the best place to find template term sheets for series A startups. Provide links and references"
    )
    print(result)
```