

```

1 from google.colab import userdata
2 api_key=userdata.get('APIKEY')
3

1 !pip install -q U langchain-google-genai

```

```

44.8/44.8 kB 1.8 MB/s eta 0:00:00
1.4/1.4 MB 20.4 MB/s eta 0:00:00
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ERROR: pip's dependency resolver does not currently take into account all the packages that are installed. This behaviour is the sou
google-generativeai 0.8.5 requires google-ai-generativelanguage==0.6.15, but you have google-ai-generativelanguage 0.6.18 which is i

```

```

1 from langchain_google_genai import ChatGoogleGenerativeAI
2 model=ChatGoogleGenerativeAI(model="gemini-2.0-flash",api_key=api_key)
3 response=model.invoke("What is meant MCP?")
4 print(response)

```

```

content='MCP can stand for a few different things, depending on the context. Here are some of the most common meanings:\n\n**1. Micr

```

```

1 !pip install langchain_community

```

```

Downloading dataclasses_json-0.6.7-py3-none-any.whl.metadata (25 kB)
Collecting pydantic-settings<3.0.0,>=2.4.0 (from langchain_community)
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Collecting marshmallow<4.0.0,>=3.18.0 (from dataclasses_json<0.7,>=0.5.7->langchain_community)
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Downloading dataclasses_json-0.6.7-py3-none-any.whl (28 kB)
Downloading httpx_sse-0.4.0-py3-none-any.whl (7.8 kB)
Downloading pydantic_settings-2.9.1-py3-none-any.whl (44 kB)
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Downloading marshmallow-3.26.1-py3-none-any.whl (50 kB)
50.9/50.9 kB 1.3 MB/s eta 0:00:00
Downloading python_dotenv-1.1.0-py3-none-any.whl (20 kB)
Downloading typing_inspect-0.9.0-py3-none-any.whl (8.8 kB)
Downloading mpy_extensions-1.1.0-py3-none-any.whl (5.0 kB)
Installing collected packages: python-dotenv, mpy-extensions, marshmallow, httpx-sse, typing-inspect, pydantic-settings, dataclas
Successfully installed dataclasses_json-0.6.7 httpx-sse-0.4.0 langchain_community-0.3.24 marshmallow-3.26.1 mpy-extensions-1.1.0

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1 !pip install langgraph

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Requirement already satisfied: langgraph in /usr/local/lib/python3.11/dist-packages (0.4.7)
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```
1 | pip install langgraph tavily-python
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Requirement already satisfied: langgraph in /usr/local/lib/python3.11/dist-packages (0.4.7)
Requirement already satisfied: tavily-python in /usr/local/lib/python3.11/dist-packages (0.7.3)
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Requirement already satisfied: sniffio>=1.1 in /usr/local/lib/python3.11/dist-packages (from anyio->httpx->tavily-python) (1.3.1)

```

```

1 from typing import List
2 from langchain_core.messages import HumanMessage, AIMessage, BaseMessage
3 from langchain_core.tools import tool
4 from tavily import TavilyClient
5 from langgraph.graph import MessageGraph, END
6 from google.colab import userdata
7 search_key=userdata.get('Search_key')
8 tavily = TavilyClient(api_key=search_key)
9
10 @tool(description="Extracted Structured data like profile , skills , experience from resume")
11 def Parse_Resume(text) :
12     prompt=f"Extract structured info like skills, roles, years of experience from this resume:\n\n{text}"
13     return model.invoke([HumanMessage(content=prompt)]).content
14
15 @tool(description="Searching")
16 def Search_tavily(query):

```

```

16 def search_tavily(query):
17     results=tavily.search(query)
18     print(results)
19     return results["results"]
20
21 #Nodes
22 def Profile_node(state: List[BaseMessage])-> List[BaseMessage]:
23     resume=state[-1].content
24     profile= Parse_Resume.invoke(resume)
25     return state+[AIMessage(content=f"Extracted Profile:{profile}")]
26
27 def job_search_node(state: List[BaseMessage])-> List[BaseMessage]:
28     profile=state[-1].content
29     query = model.invoke([HumanMessage(content=f"Based on this profile, write a job search query/description: \n{profile}, keep the que
30     jobs=Search_tavily.invoke(query)
31     return state+[AIMessage(content=f"Found Jobd:\n {jobs}")]
32
33 def matcher_node(state: List[BaseMessage])-> List[BaseMessage]:
34     profile=state[-2].content
35     jobs=state[-1].content
36     prompt=f"Given this profile:\n{profile} and recommend top 3 jobs from:\n{jobs}"
37     ranked=model.invoke([HumanMessage(content=prompt)])
38     return state + [AIMessage(content=f"Ranked Jobs:\n{ranked}")]
39
40 def cover_letter_node(state:List[BaseMessage])-> List[BaseMessage]:
41     profile=state[-3].content
42     jobs=state[-2].content
43     ranked=state[-1].content
44     prompt1=f"Write a cover letter for this job:{ranked} \n\n based on the profile{profile} "
45     cover_letter=model.invoke([HumanMessage(content=prompt1)])
46     return state+[AIMessage(content=f"Cover Letter:\n{cover_letter}")]
47
48 graph=MessageGraph()
49 graph.add_node("Profile",Profile_node)
50 graph.add_node("JobSearch",job_search_node)
51 graph.add_node("Matcher",matcher_node)
52 graph.add_node("CoverLetter",cover_letter_node)
53 graph.add_edge("Profile", "JobSearch")
54 graph.add_edge("JobSearch", "Matcher")
55 graph.add_edge("Matcher", "CoverLetter")
56 graph.add_edge("CoverLetter",END)
57 graph.set_entry_point("Profile")
58 Career_agent=graph.compile()
59
60 Input_msg=HumanMessage(content="See, I am fresher with no experience and have done projects in cloud, Machinelearning and in GenAI")
61 response=Career_agent.invoke(Input_msg)
62
63 for msg in response:
64     print({msg.content})
65
66
67
68
69
70
71
72
73
74
75
76
77
78

```

```

➞ {'query': '**Option 1 (Shortest):**\n\n> Cloud Computing, Machine Learning, GenAI - Entry Level\n\n**Option 2 (Slightly More Specifici
{'See, I am fresher with no experience and have done projects in cloud, Machinelearning and in GenAI'}
{'Extracted Profile:``json\n\n  "experience": {\n    "years": 0,\n    "details": "Fresher with no experience"\n  },\n  "skills":
{"Found Jobd:\n [{"title": 'Top 10 Entry-Level Tech Jobs in 2025 - nextwork.org', 'url': 'https://www.nextwork.org/blog/top-10-entry
{'Ranked Jobs:\ncontent='\nOkay, given the candidate profile and the job search results, here are my top 3 job recommendations, along
{'Cover Letter:\ncontent='\nOkay, based on the provided job search results and candidate profile, here\\\'s a cover letter template 1

```

