

**LLMS
ENTITIES
EXTRACTION
USING
FUNCTIONS_
CALLING**



DEFINE CLASS TO EXTRACT INFORMATION

```
1  from pydantic import BaseModel
2  from typing import List
3
4
5  class Person(BaseModel):
6      first_name: str
7      name: str
8
9  class Data(BaseModel):
10     """Information about financial doc
11     company: str
12     sponsor: str
13     key_persons: List[Person]
14     investors: List[str]
15     ...
16
17
18
```

```
27 model = ChatOpenAI(model="gpt-4o", temperature=0)
28 extraction_functions = [convert_to_openai_function(Entities)]
29
30 extraction_model = model.bind(functions=extraction_functions, function_call={"name": "Entities"})
31
32 prompt = ChatPromptTemplate.from_messages([
33     ("system", "Your task is to Extract entities"),
34     ("human", '{input}')]
35 ])
36 extraction_chain = prompt | extraction_model | JsonOutputFunctionsParser()
37
```

SETUP EXTRACTION CHAIN

INVOKE CHAIN

```
139 response = extraction_chain.invoke({"input": text})  
140 print(json.dumps(response, indent=4, ensure_ascii=False))
```