

Course Recommendation ChatBot

Triluxo Technologies Private Limited

- AI Developer job

Presented By

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Agenda

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Introduction

- A chatbot is a computer program or AI application designed to simulate human conversation through text or voice interactions with users
- Chatbots are used in various industries, including customer support, e-commerce, healthcare, and more, to automate tasks, provide information, and assist users in a conversational manner, improving efficiency and user experience

Problem Statement

- Creating a custom chatbot that can suggest technical courses to students based on the information available at the following link :
<https://brainlox.com/courses/category/technical>

Data Collection and Preparation

- Data is Collected by scraping the course information (titles, descriptions, and URLs) from the provided link using web scraping tool BeautifulSoup
- Scraped Data is structured as Course Title and Course Description to make it suitable for chatbot training

Course Name

LEARN SCRATCH PROGRAMING

Course Description

Scratch Course is the foundation of coding and is a building block of a coding journey. If you want to Kickstart your coding journey, scratch programming

MAIN FEATURES OF THE PROGRAM

One on One Live Interactive Sessions with verified Instructor

Customized Curriculum according to your kid's progress

Simple and interesting assignments for easy learning

Class Tracking Report on a daily basis.

Strong focus on Learning with Fun

Complete access to the study materials and PowerPoint Slides.

Course Name

LEARN CLOUD COMPUTING BASICS-AWS

Course Description

In this course we are going to cover the basics and the most important services on AWS,

At the end of this course, you will have a solid understanding of AWS and you can start using it for your projects.

MAIN FEATURES OF THE PROGRAM:

- One on One Live Interactive Sessions with verified Instructor
- Customized Curriculum according to your kid's progress
- Simple and interesting assignments for easy learning
- Class Tracking Report on daily basis.
- Strong focus on Learning with Fun
- Complete access of the study materials and Power Point Slides.

Model Integration

- For Model Integration LangChain + OpenAI has been used

Importing Necessary Libraries

```
[ ] from langchain.chains.question_answering import load_qa_chain  
    from langchain.llms import OpenAI
```

Setting-Up OpenAI_API_Key

```
[ ] import os  
    os.environ["OPENAI_API_KEY"] = #"YOUR-OPENAI-API-KEY"
```

Defining LangChain

```
[ ] chain = load_qa_chain(OpenAI(), chain_type="stuff")
```

Chatbot Development

- For Chatbot Development, the data is splitted into smaller chunks
- Embedding is applied onto the text chunks using the OpenAIEmbeddings Package to convert text into vector form

```
[ ] from langchain.text_splitter import CharacterTextSplitter

text_splitter = CharacterTextSplitter(
    separator = "\n",
    chunk_size = 2000,
    chunk_overlap = 200,
    length_function = len,
)
texts = text_splitter.split_text(data)
```

```
[ ] len(texts)
```

```
[ ] from langchain.embeddings.openai import OpenAIEmbeddings
embeddings = OpenAIEmbeddings()
```

```
[ ] from langchain.vectorstores import FAISS
docsearch = FAISS.from_texts(texts, embeddings)
```

```
[ ] docsearch
```

```
<langchain.vectorstores.faiss.FAISS at 0x798a1b444d00>
```

Chatbot Testing

- Querying the Developed ChatBot for Course Recommendation

```
[ ] query = "I am beginner in Java programming. Suggest me the course that will help me to upgrade my knowledge"  
docs = docsearch.similarity_search(query)  
chain.run(input_documents=docs, question=query)
```

' LEARN CORE JAVA PROGRAMMING ONLINE is a course designed for beginners to learn Java programming. It covers basics of Java, Flow of execution, Data Types and their functions and loops. It also provides practice questions and teaches logic building. Sufficient amount of fundamental knowledge will be provided which is necessary enough to pursue the Intermediate Java Courses.'

LEARN CORE JAVA PROGRAMMING ONLINE is a course designed for beginners to learn Java programming. It covers basics of Java, Flow of execution, Data Types and their functions and loops. It also provides practice questions and teaches logic building. Sufficient amount of fundamental knowledge will be provided which is necessary enough to pursue the Intermediate Java Courses.

Chatbot Deployment

- Developed ChatBot is Deployed onto the Web using Gradio Library

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Course Recommendation

user_input

I am beginner in Python programming. Suggest me the course that will help me to upgrade my knowledge

Clear Submit

output

The Python Programming-Beginner Course is a great choice for those who are just starting out with Python programming. With this course, students will understand Programming and Python. The course covers basics of Python, Flow of Execution, Data Types and their functions and loops. There will also be practice questions and teaching to create a simple game using Random Module. This course will provide students with the fundamental knowledge necessary to pursue the Intermediate Python Courses.

Flag

Conclusion

- Thus, the custom chatbot was created using LangChain + OpenAI, which can suggest the technical courses to students based on the information available at the following link <https://brainlox.com/courses/category/technical>

References

- [1] <https://brainlox.com/courses/category/technical>
- [2] <https://python.langchain.com/>
- [3] <https://platform.openai.com/docs/models>

Thank You