Course Recommendation ChatBot Triluxo Technologies Private Limited - Al Developer job

Presented By

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Agenda

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- Problem Statement
- Data Collection and Preparation
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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 + OpenAl 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 OpenAlEmbeddings
 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)
```

```
[ ] 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

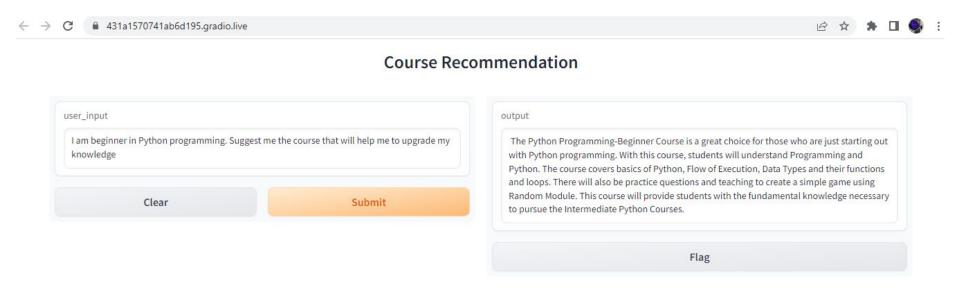
```
[ ] query = "I am beginner in Java programming. Suggest me the course that will help me to upgrade my knowledge" docs = docsearch.similarity_search(query) chain.run(input_documents=docs, question=query)
```

' 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.'

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Chatbot Deployment

Developed ChatBot is Deployed onto the Web using Gradio Library



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