

## ED-TECH INDUSTRY QA BOT

This is an LLM project based on Google Palm and Langchain. I have built a Q&A system for an e-learning company. Ed Tech company data-related courses and bootcamps were collected. They have thousands of learners who use the Discord server or email to ask questions. This system will provide a streamlit based user interface for students where they can ask questions and get answers.

### Project Structure

- `main.py`: The main Streamlit application script.
- `langchain_helper.py`: This has all the langchain code
- `requirements.txt`: A list of required Python packages for the project.
- `.env`: Configuration file for storing your Google API key.

### Key Technologies

#### 1. LangChain

- **Description:** LangChain is a Python library designed for chaining together components for building applications with language models.
- **Role in Project:** It serves as the backbone for integrating various NLP functionalities, like question-answering and document retrieval.

#### 2. Google Palm (LLM - Large Language Model):

- **Description:** Google Palm is utilized as the Large Language Model (LLM) for natural language processing tasks.
- **Role in Project:** The primary language model for generating embeddings and providing answers based on the content of news articles.

#### 3. Streamlit

- **Description:** Streamlit is an open-source app framework for Machine Learning and Data Science projects.
- **Role in Project:** It is used to build and deploy the user interface of the news research tool, making it interactive and easy to use.

#### 4. FAISS (Facebook AI Similarity Search)

- **Description:** FAISS is a library for efficient similarity search and clustering of dense vectors.
- **Role in Project:** It is utilized for storing and retrieving document embeddings, enhancing the tool's ability to find relevant news articles quickly.

#### 5. Environment Management (.env)

- **Description:** Environment variables are used for configuration and setting up important parameters like API keys.
- **Role in Project:** Secure handling of the Google Palm API key and other sensitive configurations.

#### Project Flow:

1. Install the required library package mentioned in requirement text.
2. Run this command: `streamlit run main.py`
3. The web app will open in your browser.
4. To create a knowledgebase of FAQs, click on Create Knowledge Base button. It will take some time before knowledgebase is created so please wait.
5. Once knowledge base is created you will see a directory called `faiss_index` in your current folder
6. Now you are ready to ask questions. Type your question in Question box and hit Enter

#### Sample Questions:

- Do you guys provide internship and do you offer EMI payments?
- Do you have javascript course?
- Should I learn power bi or tableau?
- I've a MAC computer. Can I use PowerBI on it?
- I do not see power pivot. how can I enable it?