SMART INDIA HACKATHON 2022

Problem Statement Details

Organization Name: All India Council for Technical Education (AICTE)

PS Code: DR702

Problem Statement Title: AI based Chatbot to answer FAQs

Team Name: Prativachan (प्रतिवचन)

Team Leader Name: Harshil Khamar

Institute Code: C212

Institute Name: L.D. College Of Engineering

Theme Name: Smart Automation

Idea/Approach Details

Describe your idea/Solution/Prototype here:

Source of problem :

- Web visitors find it difficult to search information in that particular website, here comes the role of AI assistant
- For any organization it is costlier to build AI-assistant for their website and hire some developers for the same

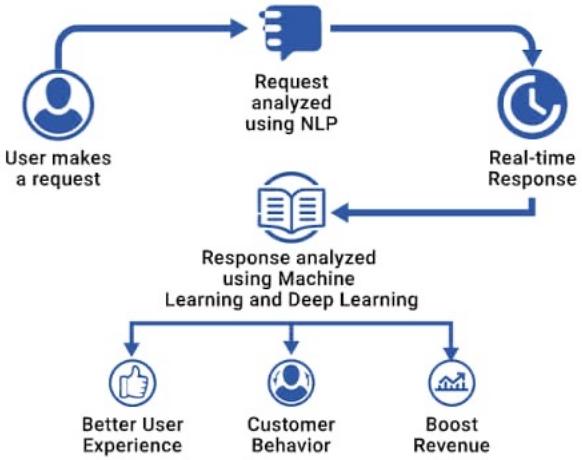
Idea :

- In this developing AI industry, AI Assistant plays a role of new human
- Yo-Bot is a platform where you will be able to create AI assistant for your Website for answering FAQs in an easy manner
- Yo-Bot is a no-code and a SaaS (Software as a Service) platform
- The algorithm is so strong that it will generate FAQs with responses by it's own by providing data as an input in different ways

Critical components :

1. Input source to generate FAQs : Source can be of any form; like link with access to data for scraping, pdf, csv, text, etc. Input source of normal FAQ pairs of question and answer : Sort FAQs for training
2. Paraphrasing of FAQs : The NLP technique will paraphrase one FAQ into 10+ different FAQs with powerful neural network T5 Transformer
3. Train FAQs for Ai-assistant : Training is done with NLP algorithm where FAQs are trained for AI-assistant for correct mapping of questions with proper answer
4. AI-assistant : AI-assistant has very User friendly interface which can be accessed with JavaScript

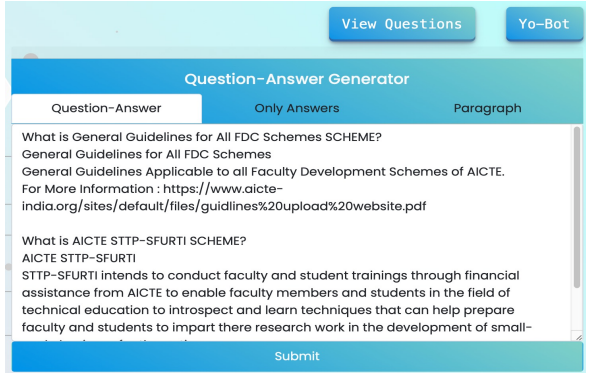
Working of Ai Assistant



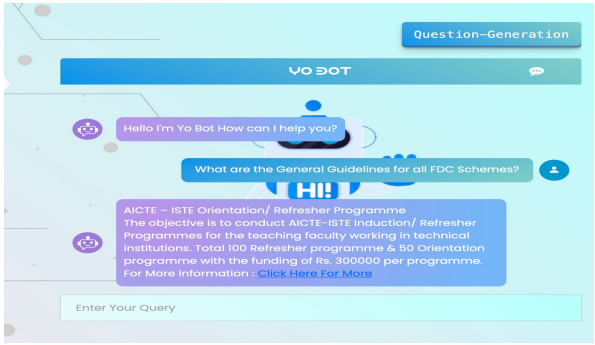
Our Technology stack :

- **AI /ML Libraries :**
  - T5 Transformer,Pytorch
  - Tensorflow, Keras
- **Web Scraping :**
  - Beautifulsoup
- **Web Technology :**
  - Frontend – Bootstrap5, jQuery & Ajax
  - Backend - Django
- **Database :**
  - Database- MySQL

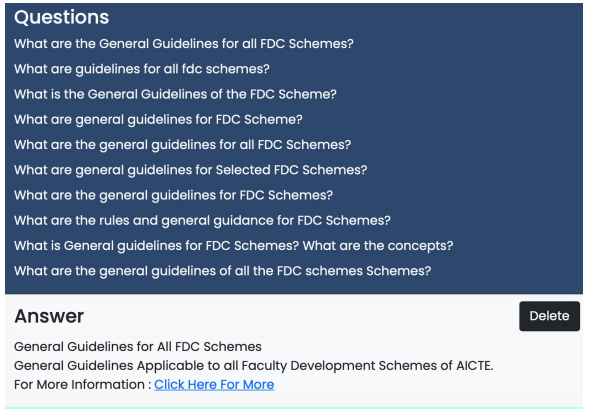
Question Generator



AI-assistant

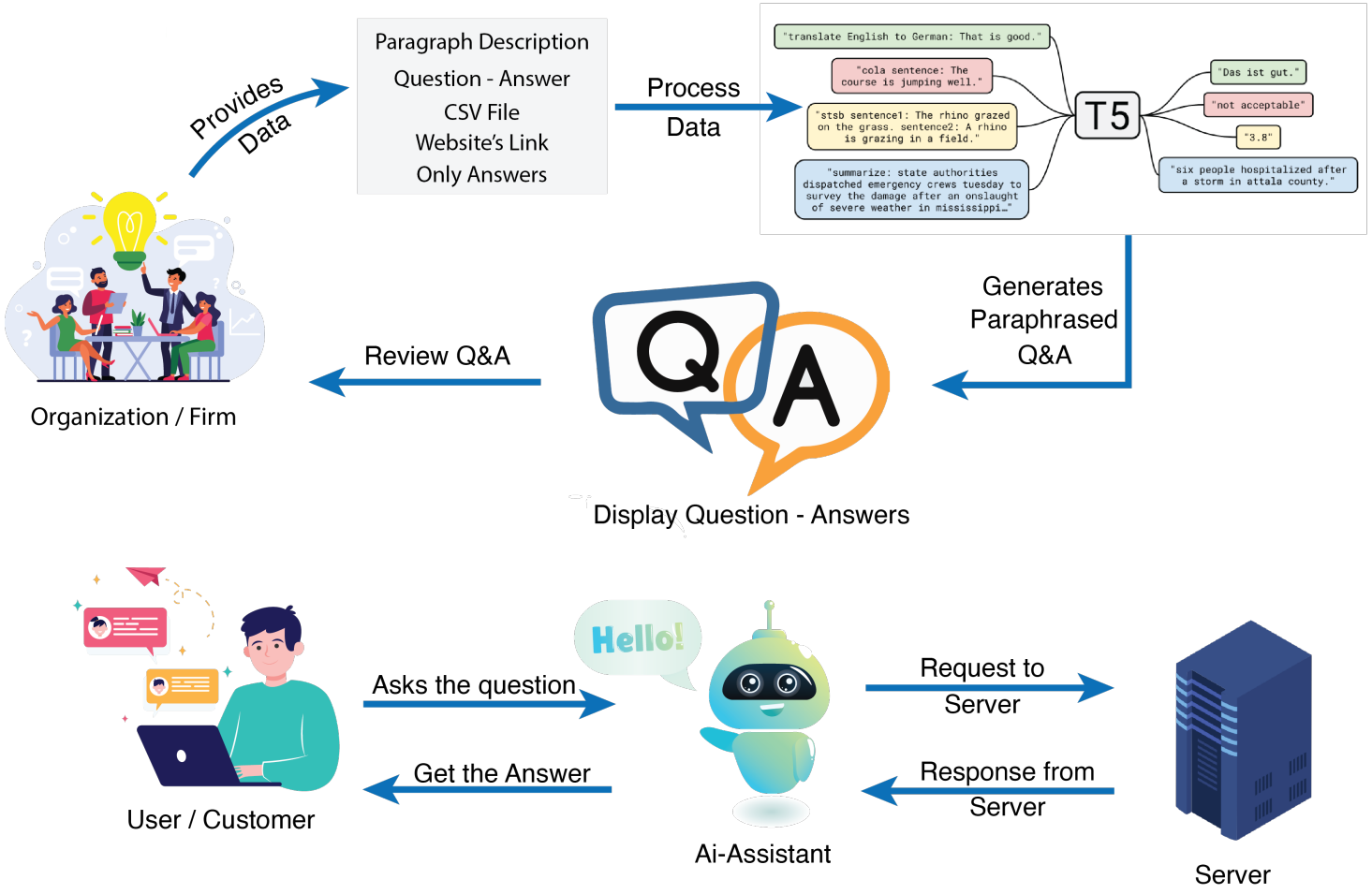


Questions & Answer



Idea/Approach Details

Workflow of Yo-Bot Platform :



Use Cases :

- Banking websites : To answer user queries
- E-commerce websites : To know the product information
- University websites : To know where to find required information
- Government websites : To know about new schemes and find section in site

Our Dependencies :

- Needs Website's SSL Access while we gather information from it
- Model will be trained by different types of data (i.e. Structured, Semi structured and unstructured) so, pre processed data will lead to higher accuracy.

Our Showstopper :

- Generate FAQs and provide AI Assistant from website's URL
- Reduces user query calls for organization/firm
- Any organization can use this platform to build AI-assistant for their website through our API

Team Member Details

Team Leader Name: Harshil A Khamar

Branch : Btech | Stream : CSE | Year : III

Team Member 1 Name: Siddhi K Doshi

Branch : Btech | Stream : CSE | Year : III

Team Member 2 Name: Rishikumar R Patel

Branch : Btech | Stream : CSE | Year : III

Team Member 3 Name: Shreya Parmar

Branch : Btech | Stream : CSE | Year : IV

Team Member 4 Name: Rutvikkumar S Patel

Branch : Btech | Stream : CSE | Year : III

Team Member 5 Name: Devashri Narendra Chauhan

Branch : Btech | Stream : CSE | Year : III

Team Mentor 1 Name: Prof. Hetal Joshiyara

Category : Academic | Expertise : AI, ML, Blockchain, Big Data | Domain Experience (in years): 17

Team Mentor 2 Name: Prof. Parth Dave

Category : Academic | Expertise : AI, ML, Network Security, Microprocessor | Domain Experience (in years): 7