

AI Based Chatbot to answer Frequently Asked Questions (FAQs)

Abstract— Chatbot is a software application used to conduct an on-line chat conversation via text or text-to-speech, instead of providing direct contact with a live human. A FAQ (Frequently Asked Questions) Chatbot is a software application that is beneficial for answering some of the most frequently asked questions the customers may have.

Product/Idea:

Problem:

- Most of the government websites that either provide a service or is an information portal require a lot of customer care support only to answer a lot of frequently asked questions. This leads to a waste of both the customers time and makes the sites less user friendly.
- Moreover, with everything going online, the footfall is only going to increase. This will further clutter the user experience who could have visited a particular site for the resolution of a simple query or was looking for a step-by-step solution to a problem they are facing.
- Most of the bandwidth of customer agents, IT and HR helpdesk staff is consumed in handling repetitive customer and employee queries. These lost man-hours mean a concerning loss of productivity, efficiency and increased support costs.

Solution:

- We can create An FAQ chatbot. It is a type of bot that **helps answer some of the most frequently asked questions** your customers or prospects may have on your site or social media page. FAQ bots provide **well-structured answers** about your business brand, products or services, and help direct your customers to the appropriate website pages any time of the day. They are usually **available 24 hours of the day, every day**.
- We can develop an AI based Chatbot (mobile/web app) to create answers to queries based on FAQs and more FAQs getting automatically added including categorization. We can use machine learning algorithms to increase the dataset of questions and answers and ensure that the mapping of questions and answers remain maintained every time there is an increase in the dataset.

Target Customers:

- Government Portals
- Help Pages of Websites/Apps
- Digital Assistants

Novelty: *AI based chatbots with a limited questionnaire are common these days. But AI based chatbots with an ever-expanding question and answers like ours is rare. Our product further stands apart from the competition because it is specifically designed for the All-India Council of Technical Education portal. So, it can provide a comprehensive, specialised support to the portal.*

Revenue Generation Model: We currently do not have a revenue generation model but we can provide this service on subscription basis.

Risks Associated and their solutions:

- Our model can overfit on the dataset as is the problem with a lot of neural network-based solutions. Solution: Adding dropout layer and selecting better activation functions can solve the problem to a great extent.
- Mapping of new questions to answers could be erroneous. Solution: Employ better mapping algorithms.
- User communicates in a different language. Solution: Provide better language support using google translate API or deepL API.
- Data Alteration by Hackers. Solution: Use better Security system for website/App.

Stakeholders:

- Website/App owners
- Government

Intellectual Property Assessment:

Patent: NA

Similar sites:

- [FAQ Bot - Chatbot, Help Pages, Live Chat](#)
- [Call Center Software | Call Center Solution | Helpdesk Software - Ameyo](#)

Prototype/ Proof of Concept:

Nature of Prototype: Software

Proof of concept: [Github Repository for Chatbot](#)

Operational Cost: Cost to Deploy our software on AWS or any other server.
Estimated: Rs70000 per annum

Elements of Prototype:

