

AI Powered Chatbot

Introduction:

The project aimed to improve the user experience on some government websites by streamlining and simplifying the process of addressing user queries, which were highly time-consuming up until then. It is typical for government websites to be comprehensive in terms of the information they share. With this project, the goal was to minimize the time that gets consumed in accessing any required information in these websites; leading to a more seamless and efficient experience for the users.

Technologies:

- **React:** Training app and chat bot front end
- **Python:** Backend application
- **MariaDB:** Database
- **IIS:** Web server
- **Uvicorn:** Application Server
- **GitLab:** Source code management
- **ChatGPT:** OpenAI's ChatGPT model for data analysis and prompt processing etc.

Client Details

Name: Confidential | **Industry:** Software | **Location:** USA

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Project Description:

Problems:

- **Information Overload:** These websites often contain a vast amount of content, which can be overwhelming for users trying to find specific information. Navigating through many pages and sections to access relevant data becomes time consuming and discourages users from exploring further.
- **Ineffective Search Option:** While a search feature is usually present, it often fails to deliver accurate results or filters out irrelevant content like Static Search content and cannot search from website documents (pdf, docx) content.
- **Complex Navigation:** Users struggle to understand the hierarchy of pages and categories, leading to difficulties in finding the information they require.
- **Broader Context:** Users cannot narrow down searches to specific categories, resulting in a broader and less targeted search experience.

Challenges:

- **Data Analysis:** Performing extensive analysis of website data to extract summarized insights.
- **Response Time:** Delivering real time responses from massive datasets, to ensure dynamic and timely interactions with users.
- **Continuation:** Continuing the conversation to provide seamless and coherent interactions.

Approach:

- Our strategy involved training the ChatGPT model with customized data for individual websites. The intention behind this was to create a chatbots mapped to corresponding websites so that the responses they offer are relevant.
- By training the chatbots with data unique to their corresponding websites, we aimed to enable them to understand and address user queries accurately, within the context of that sites they were mapped to.

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- Categories are used to refine and limit data, enabling focused content exploration.
- Utilizing ChatGPT facilitates seamless chat continuation by retaining previous context.

Modules:

User Management:

- User registration and account creation.
- Authentication and password management.
- User roles and permissions assignment.
- Profile customization and preferences.
- Activity tracking and user engagement analysis.

Site Management:

- Website Configuration.
- Website Access Management.
- Chatbot Script generation.

Document Management:

- Training Chatbot model with large data files.
- Train model from website url.
- Retrain model.
- Remove obsolete trained data.

Category Management:

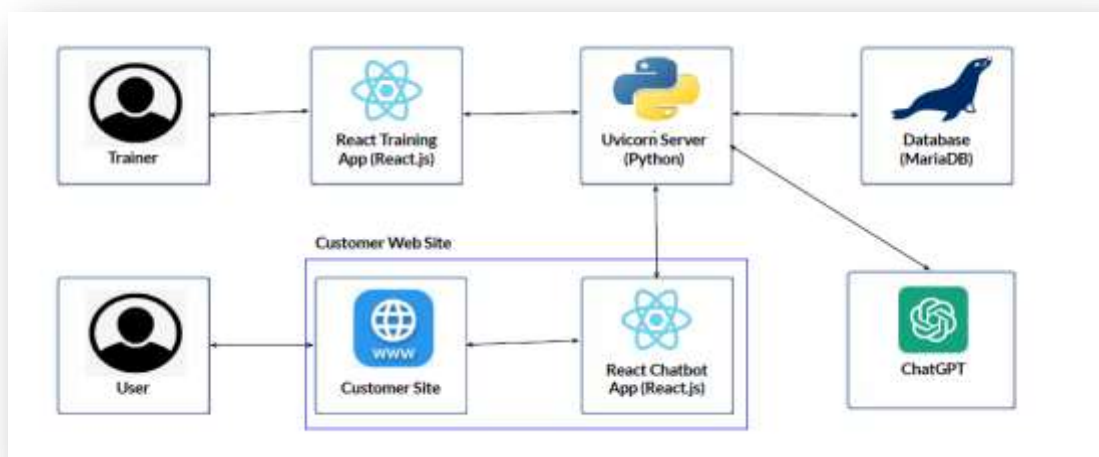
- Manage Category.
- Train model for specific category.

Statistics Management:

- Gather multiple statistics.
- Provide insights in the dashboard.
- Generate usage and billing reports.

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Architecture Diagram:



Screenshots:

Trained Documents:

The screenshot displays a web interface for managing trained documents. The page title is "Trained Documents/Pages - Mindfire Digital LLP". It features a table with columns for Document Title, Category, Status, Action, and Last Trained. The table lists several documents, including "Introduction - Mindfire Solutions", "AI, ML, Deep Learning & OpenAI", and "Python Basics - Mindfire Solutions".

Document Title	Category	Status	Action	Last Trained
Introduction - Mindfire Solutions		Trained	🗑️ 🔄	2024-07-11 11:10
AI, ML, Deep Learning & OpenAI		Trained	🗑️ 🔄	2024-07-11 10:41
Python Basics - Mindfire Solutions		Trained	🗑️ 🔄	2024-07-11 10:44
OpenAI GPT - Open AI Solutions - AI Solutions		Trained	🗑️ 🔄	2024-07-11 10:13
ReactJS Basics - Open AI Solutions - AI Solutions		Trained	🗑️ 🔄	2024-07-11 10:13
Mindfire Solutions Open AI Solutions - OpenAI		Trained	🗑️ 🔄	2024-07-11 10:10
Introduction to OpenAI GPT - Open AI Solutions - AI Solutions		Trained	🗑️ 🔄	2024-07-11 10:14
AI, ML, Deep Learning & OpenAI		Trained	🗑️ 🔄	2024-07-11 10:44
Introduction to AI		Trained	🗑️ 🔄	2024-07-11 10:41
Python & AI: Commercial Software Development Solutions - Mindfire Solutions		Trained	🗑️ 🔄	2024-07-11 10:10
AI, ML, Deep Learning & OpenAI		Trained	🗑️ 🔄	2024-07-11 10:44
Python Basics - Open AI Solutions		Trained	🗑️ 🔄	2024-07-11 10:13

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Categories:

The screenshot shows a 'Categories - TroyAI' management page. It features a table with columns for Category Name, Description, Disallowed Count, Status, and Created Time. There are 12 rows of data, each representing a different category. A '+ Add Category' button is visible in the top right corner.

Category Name	Description	Disallowed Count	Status	Created Time
General	Website General	0	ON	2023-01-10 10:00
Admin	Website Admin	1	ON	2023-01-10 10:00
Media	Website Media	0	ON	2023-01-10 10:00
News	Website News	0	ON	2023-01-10 10:00
IT	Website Information Technology	0	ON	2023-01-10 10:00
Entertainment	Website Entertainment	0	ON	2023-01-10 10:00
Sports	Website Sports	0	ON	2023-01-10 10:00
AI	Website Artificial Intelligence	0	ON	2023-01-10 10:00
HR	Website Human Resource Management	0	ON	2023-01-10 10:00
Healthcare	Website Healthcare	0	ON	2023-01-10 10:00
Education	Website Education	0	ON	2023-01-10 10:00

Users:

The screenshot shows a 'Users - TroyAI' management page. It features a table with columns for Username, Password, Last Name, Email, Status, Role, and Action. There are 2 rows of data, each representing a user. A '+ Add User' button is visible in the top right corner.

Username	Password	Last Name	Email	Status	Role	Action
TroyAI	Admin		admin@troyai.com	ACTIVE	ADMINISTRATOR	EDIT, DELETE, ADD
TroyAI	Admin		admin@troyai.com	ACTIVE	ADMIN	EDIT, DELETE, ADD

Add Sites:

The screenshot shows the 'Add Site' modal form. It contains several input fields: Name, Email, Phone Number, and Website URL. There are also checkboxes for 'Add Admin' and 'Admin User'. A 'Cancel' button and an 'Add' button are at the bottom. The background shows a blurred view of the 'Sites' management page.