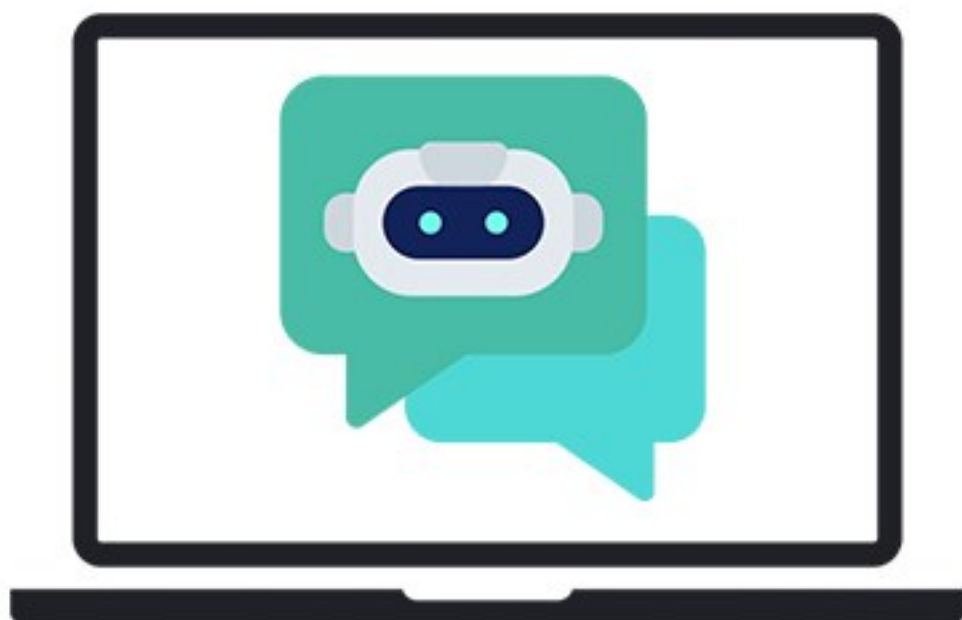




# SYRENE

## USER MANUAL

Version 1.0 | 11 January 2023



---

**SYRENE: CHATBOT ASSISTING MENTAL HEALTH PROFESSIONALS IN  
DEALING WITH PATIENTS/CLIENTS USING MACHINE LEARNING**

An Undergraduate Thesis  
Presented to the Faculty of the  
College of Information and Communications Technology  
West Visayas State University  
La Paz, Iloilo City

In Partial Fulfillment  
of the Requirements for the Degree  
Bachelor of Science in Computer Science

by  
Gene Caleb C. Carbonilla  
Xyphrus Von Keith V. Caguan  
Joshreen D. Reyes  
Jirah Kate C. Solano

## **DISCLAIMER**

The information contained on the web application is provided solely for general information purposes.

Sereniteam accepts no responsibility for errors or omissions in the web application's contents.

In no circumstances shall the Sereniteam be responsible for any special, direct, indirect, consequential, or incidental damages, or any other damages of any kind, whether in contract, negligence, or other tort, arising out of or in connection with the use of the web application or the website's contents. The Sereniteam has the right to make changes to the web application's content at any time, without notice.

The Sereniteam does not guarantee that the web application is free of viruses or other malicious components.

Every effort is made to maintain the web application accessible. Sereniteam, on the other hand, accepts no responsibility and shall not be accountable if the web application becomes momentarily inaccessible owing to technical issues beyond our control.

## TABLE OF CONTENTS

---

Contents	Page
Title Page .....	i
Disclaimer .....	ii
Getting Started .....	1
Introduction .....	1
System Requirements .....	1
Installation .....	1
Usage .....	3
<i>Introductory Page</i> .....	3
<i>Navigation Bar</i> .....	3
<i>Click-to-Chat Button</i> .....	4
<i>About Us Page</i> .....	5
<i>Contact Page</i> .....	6
Troubleshooting for Fixing Possible Bugs .....	7
FAQ (Frequently Asked Questions) .....	7
Contact Details of Sereniteam .....	8

## GETTING STARTED

---

### Introduction

Welcome to Syrene! You are about to experience in having a conversation with the chatbot by text communication. Syrene is designed to collect data from users and give tips and advices relating to mental health topics. This User Manual (UM) contains all the detailed description of all the Syrene's features for the users to make full use of the system. We are sure you will find the system easy to use. Let's get started.

### System Requirements

Before using the web application, make sure your device meets the following requirements:

- Windows 7 or higher version
- Node.js version 18.16.0
- Python 3.11.3
- Visual Studio Code
- 32MB RAM (32-bit)/(64-bit)
- 500KB disk space
- Pentium 1 GHz or faster 32-bit (x86) or 64-bit (x64)
- DirectX 9 graphics processor with WDDM 1.0 or higher driver

### Installation

Before running the web application, you must install the following files:  
This repo currently contains the starter files.

*1st step: Clone repo and create virtual environment*

```
$ git clone https://github.com/XyphrusCaguan/Thesis-Chatbot.git
$ cd Thesis-Chatbot/src/server
$ python3 -m venv venv
$ . venv/Scripts/activate
```

*2nd step: Install dependencies*

```
$ (venv) pip install -r requirements.txt
```

*3rd step: Install nltk package*

```
$ (venv) python
>>> import nltk
>>> nltk.download('punkt')
```

*4th step: Run*

```
$ (venv) python train.py
```

*5th step: This will dump data.pth file, and then run the following command to test it in the console.*

```
$ (venv) python chat.py
```

DEPLOYMENT OF BACKEND:

#Server

```
$ cd Thesis-Chatbot/src/server
$ .venv/Scripts/activate
$ (venv) python app.py
```

## INSTALLATION OF DEPENDENCIES IN FRONTEND:

#Admin

```
$ cd Thesis-Chatbot/src/admin  
$ npm install
```

#Client

```
$ cd Thesis-Chatbot/src/client  
$ npm install
```

## DEPLOYMENT OF FRONTEND:

#Admin

```
$ cd Thesis-Chatbot/src/admin/src  
$ npm start
```

#Client

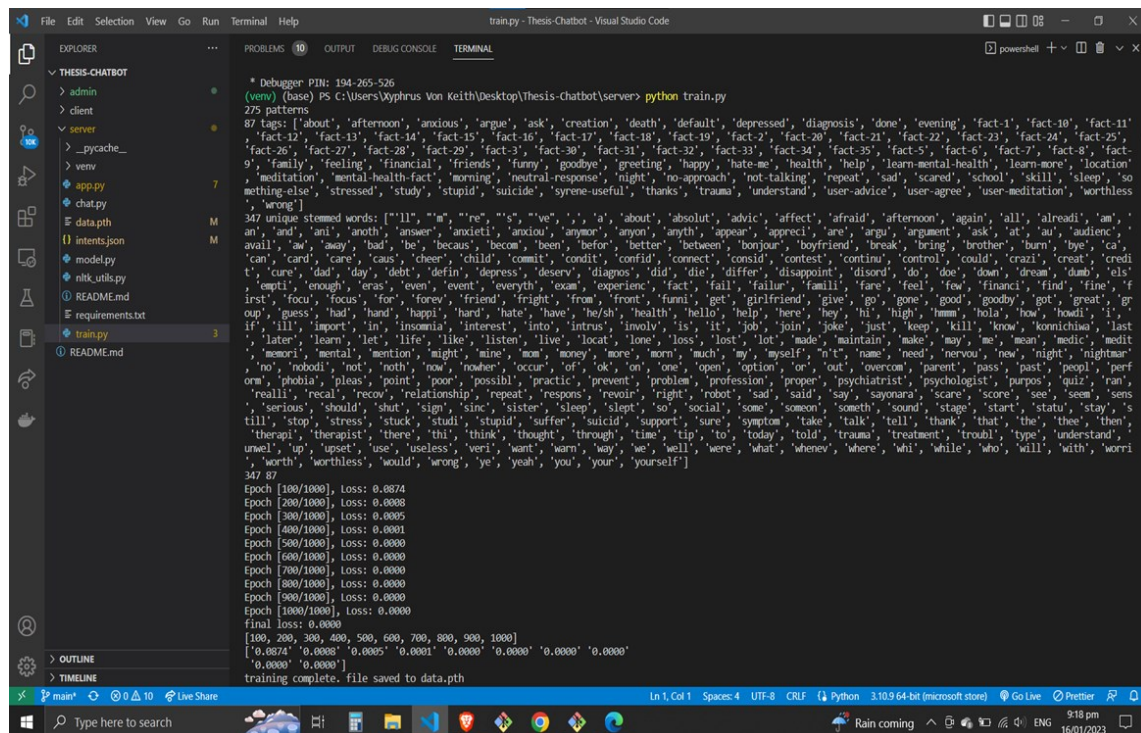
```
$ cd Thesis-Chatbot/src/client/src  
$ npm start
```

How to Train Syrene

To train Syrene, you need to type in the terminal **python train.py**

```
* Debugger PIN: 194-265-526  
(venv) (base) PS C:\Users\Xyphrus Von Keith\Desktop\Thesis-Chatbot\server> python train.py
```

Training Results after:

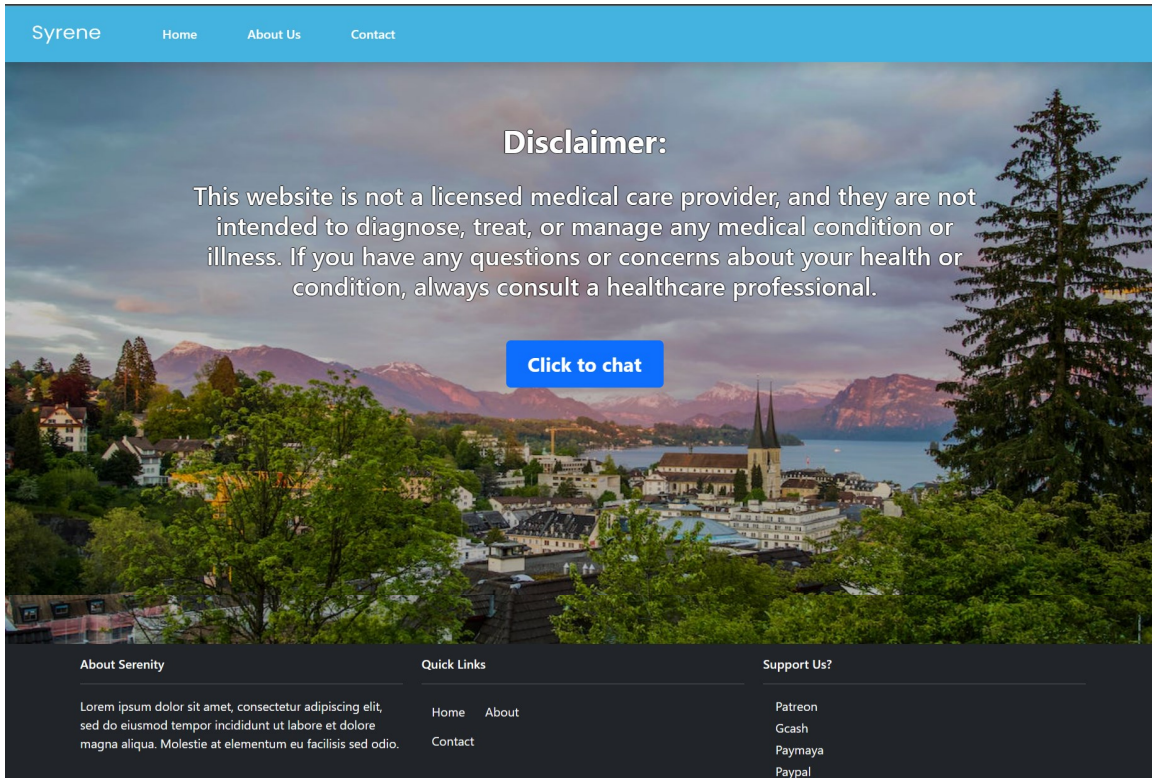


```
* Debugger PIN: 194-265-526  
(venv) (base) PS C:\Users\Xyphrus Von Keith\Desktop\Thesis-Chatbot\server> python train.py  
87 tags: ['about', 'afternoon', 'anxious', 'argue', 'ask', 'creation', 'death', 'default', 'depressed', 'diagnosis', 'done', 'evening', 'fact-1', 'fact-10', 'fact-11',  
'fact-12', 'fact-13', 'fact-14', 'fact-15', 'fact-16', 'fact-17', 'fact-18', 'fact-19', 'fact-2', 'fact-20', 'fact-21', 'fact-22', 'fact-23', 'fact-24', 'fact-25',  
'fact-26', 'fact-27', 'fact-28', 'fact-29', 'fact-3', 'fact-30', 'fact-31', 'fact-32', 'fact-33', 'fact-34', 'fact-35', 'fact-5', 'fact-6', 'fact-7', 'fact-8', 'fact-9',  
'family', 'feeling', 'financial', 'friends', 'funny', 'goodbye', 'greeting', 'happy', 'hate-me', 'health', 'help', 'learn-mental-health', 'learn-more', 'location',  
'meditation', 'mental-health-fact', 'morning', 'neutral-response', 'night', 'no-approach', 'not-talking', 'repeat', 'sad', 'scared', 'school', 'skill', 'sleep', 'so  
mething-else', 'stressed', 'study', 'stupid', 'suicide', 'syrene-useful', 'thanks', 'trauma', 'understand', 'user-advice', 'user-agree', 'user-meditation', 'worthless',  
'wrong']  
275 patterns:  
347 unique stemmed words: ['ill', 'm', 're', 's', 've', 'a', 'about', 'absolut', 'advic', 'affect', 'afraid', 'afternoon', 'again', 'all', 'alreadi', 'am', 'an',  
'and', 'an', 'anoth', 'answer', 'anxiety', 'anxiou', 'anyon', 'anyth', 'appear', 'appreci', 'are', 'argu', 'argument', 'ask', 'at', 'au', 'audienc', 'a  
vail', 'aw', 'away', 'bad', 'be', 'becaus', 'becom', 'been', 'befor', 'better', 'between', 'bonjour', 'boyfriend', 'break', 'bring', 'brother', 'burn', 'bye', 'ca',  
'can', 'card', 'care', 'caus', 'cheer', 'child', 'commit', 'confid', 'connect', 'consid', 'contest', 'continu', 'control', 'could', 'crazi', 'creat', 'credi  
t', 'cure', 'dad', 'day', 'debt', 'defin', 'depress', 'deserv', 'diagnos', 'did', 'die', 'differ', 'disappoint', 'disord', 'do', 'doe', 'down', 'dream', 'dumb', 'els  
'empti', 'enough', 'eras', 'even', 'event', 'everyth', 'exam', 'experienc', 'fact', 'fail', 'failur', 'famili', 'fare', 'feel', 'few', 'financi', 'find', 'fine', 'f  
irst', 'focus', 'for', 'forev', 'friend', 'fright', 'from', 'front', 'furni', 'get', 'girlfriend', 'give', 'go', 'gone', 'good', 'goodby', 'got', 'great', 'gr  
oup', 'guess', 'had', 'hand', 'happi', 'hard', 'hate', 'have', 'he/sh', 'health', 'hello', 'help', 'here', 'hey', 'hi', 'high', 'hmm', 'hola', 'how', 'howdi', 'i',  
'if', 'ill', 'import', 'in', 'insomnia', 'interest', 'into', 'intrus', 'involv', 'is', 'it', 'job', 'join', 'joke', 'just', 'keep', 'kill', 'know', 'konnicchiwa', 'last  
'later', 'learn', 'let', 'life', 'like', 'listen', 'live', 'locat', 'lone', 'loss', 'lost', 'lot', 'made', 'maintain', 'make', 'may', 'me', 'mean', 'medic', 'medit  
'memori', 'mental', 'mention', 'might', 'mine', 'mom', 'money', 'more', 'morn', 'much', 'my', 'myself', 'n't', 'name', 'need', 'nervou', 'new', 'night', 'nightmar  
'no', 'nobodi', 'not', 'noth', 'now', 'nowher', 'occur', 'of', 'ok', 'on', 'one', 'open', 'option', 'or', 'out', 'overcom', 'parent', 'pass', 'past', 'peopl', 'perf  
om', 'phobia', 'pleas', 'point', 'poor', 'possibl', 'practic', 'prevent', 'problem', 'profession', 'proper', 'psychiatrist', 'psychologist', 'purpos', 'quiz', 'ran',  
'realli', 'recal', 'recov', 'relationship', 'repeat', 'respons', 'revolv', 'right', 'robot', 'sad', 'said', 'say', 'sayonara', 'scare', 'score', 'see', 'seem', 'sens  
'serious', 'should', 'shut', 'sign', 'sinc', 'sister', 'sleep', 'slept', 'so', 'social', 'some', 'someon', 'someth', 'sound', 'stage', 'start', 'statu', 'stay', 's  
till', 'stop', 'stress', 'stuck', 'studi', 'stupid', 'suffer', 'suicid', 'support', 'sure', 'symptom', 'take', 'talk', 'tell', 'thank', 'that', 'the', 'thee', 'then',  
'therapi', 'therapist', 'there', 'thi', 'think', 'thought', 'through', 'time', 'tip', 'to', 'today', 'told', 'trauma', 'treatment', 'troubl', 'type', 'understand',  
'unwel', 'up', 'upset', 'use', 'useless', 'veri', 'want', 'warn', 'way', 'we', 'well', 'were', 'what', 'whenev', 'where', 'whi', 'while', 'who', 'will', 'with', 'worri  
'worth', 'worthless', 'would', 'wrong', 'ye', 'yeah', 'you', 'your', 'yourself']  
347 87  
Epoch [100/1000], Loss: 0.0874  
Epoch [200/1000], Loss: 0.0008  
Epoch [300/1000], Loss: 0.0005  
Epoch [400/1000], Loss: 0.0001  
Epoch [500/1000], Loss: 0.0000  
Epoch [600/1000], Loss: 0.0000  
Epoch [700/1000], Loss: 0.0000  
Epoch [800/1000], Loss: 0.0000  
Epoch [900/1000], Loss: 0.0000  
Epoch [1000/1000], Loss: 0.0000  
Final loss: 0.0000  
100, 200, 300, 400, 500, 600, 700, 800, 900, 1000]  
[0.0874, 0.0008, 0.0005, 0.0001, 0.0000, 0.0000, 0.0000, 0.0000, 0.0000, 0.0000]  
[0.0000, 0.0000]  
training complete, file saved to data.pth
```

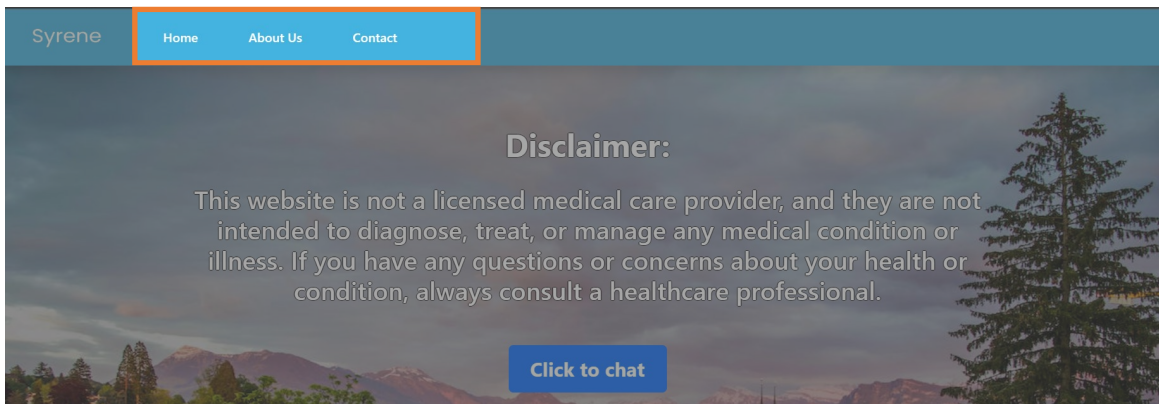
## USAGE

### Introductory Page (Home Page)

The “*Home page*” provides access to features. This homepage serves as the first initial representation of the web application. It gives a preview of the services available in this web application.



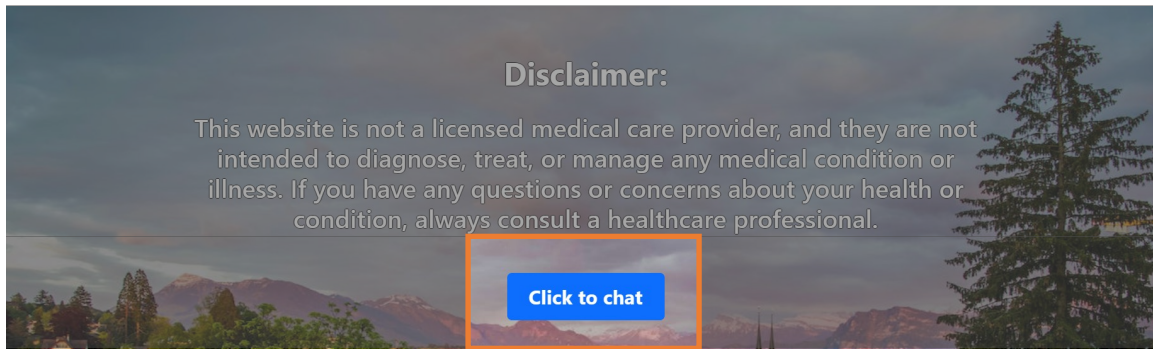
### Navigation Bar



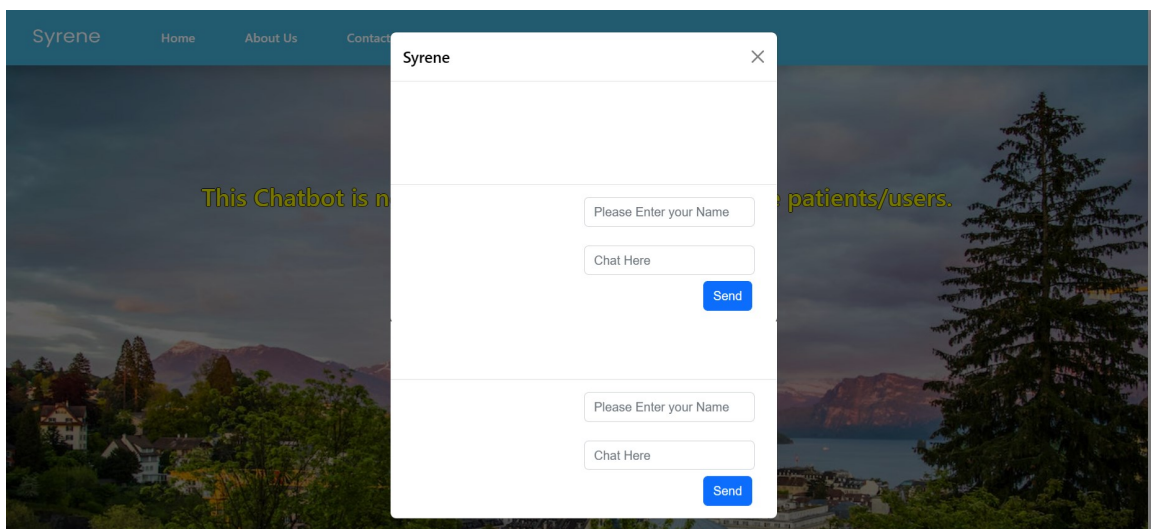
*Navigation bar* lets you navigates easily or browse through your web application effortlessly with just one click. The navigation bar contains “Home”, “About Us”, and “Contact”.



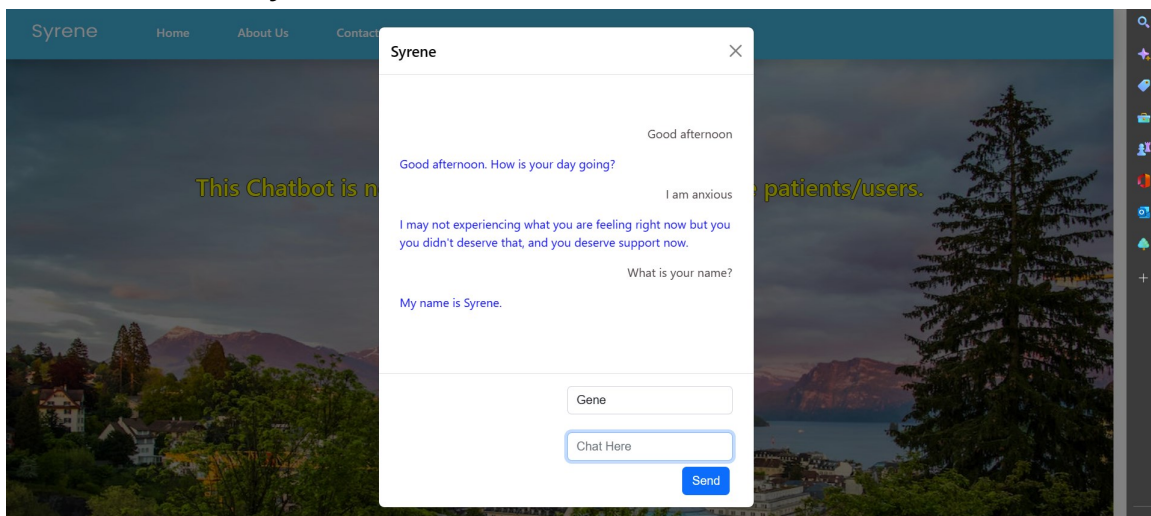
## Click-to-chat Button



*Click-to-chat button* is where you will have your conversation with Syrene (chatbot). And once you click to chat, the chat box will appear for you to input your name and start your conversation with Syrene based on the image below.



## Conversation with Syrene

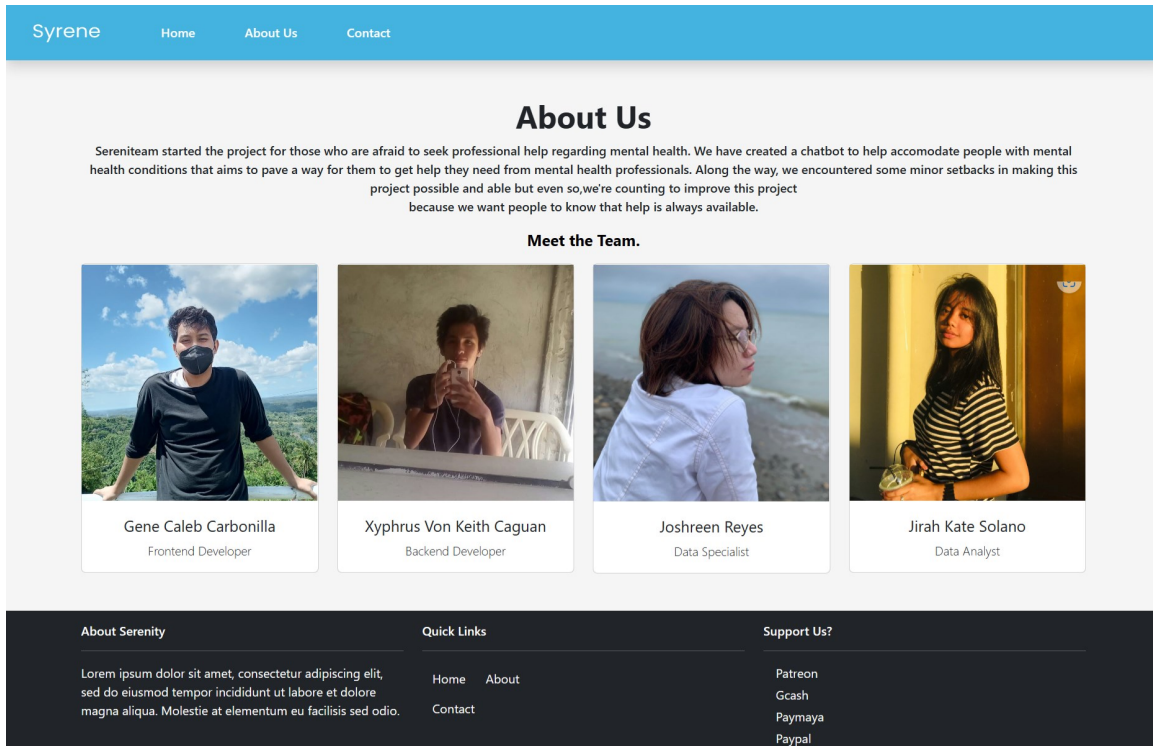


This image shown above illustrates your conversation with Syrene.



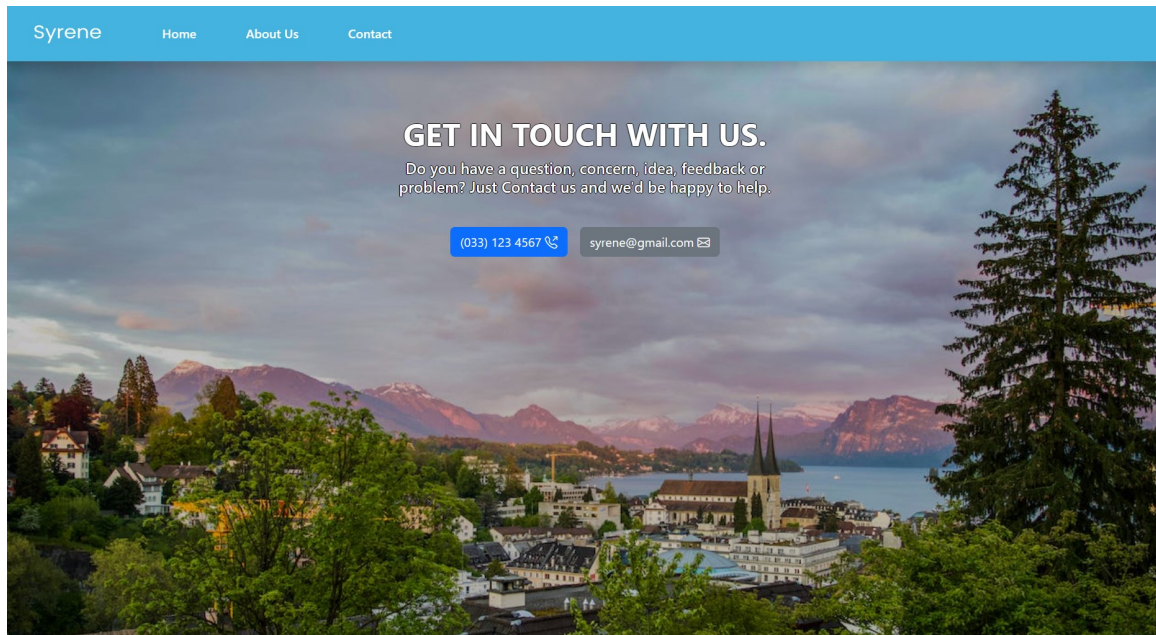
## About Us Page

The *"About Us page"* is where to inform the users about the company's goal and its operations plus the developers' profile here are being displayed.



## Contact Page

The *"Contact Page"* is where you contact us when you have any concerns regarding with the web application .



## TROUBLESHOOTING FOR POSSIBLE FIXING BUGS

---

There is no need of troubleshooting for possible fixing bugs since the web application is static.

## FREQUENTLY ASKED QUESTIONS (FAQ)

---

### 1. What is Syrene?

*Syrene is a chatbot that can interact with users via text. Syrene can interpret user queries and give relevant responses quickly.*

### 2. Who will be the chatbot users?

*Chatbot users may be anyone seeking help relating to mental health.*

### 3. Are chatbots new?

*No. Conversational chatbots have already existed for decades. Many failed attempts have been made in the past to develop a chatbot that properly mimics human speech. In 1996, MIT professor Joseph Weizenbaum developed the first chatbot namely ELIZA, which was supposed to engage with persons like a therapist.*

### 4. What kind of questions should Syrene be able to answer?

*Syrene should answer questions relating to mental health topics but can also answer basic questions like: "What is your name?"*

### 5. How Syrene would help users?

*Syrene would record a patient's data. By doing this, a medical health professional can review these data to better assist the user/patient.*

### 6. Is Syrene multilingual?

*No. Syrene is monolingual that can only understand English language.*

### 7. How does your chatbot work?

*Syrene, our chatbot, could understand and assess the user's request, responding to queries in a more human-like manner. We use machine learning algorithms that enable Natural Language Processing (NLP) for the chatbot to have conversations via text and which will facilitate the dialogue and analysis of text conversations.*

### 8. Is there a log-in page?

*No. This website doesn't have a log-in page. Just type in your name and it will directly go to our database.*

### 9. Can I find a specialist in this website?

*No. This web application doesn't provide any contact from a specialist.*

## CONTACT DETAILS OF THE SERENITEAM

---

Here are the contact details of per member of the Sereniteam:

**Gene Caleb C. Carbonilla (Front End Developer)**

Address: Brgy. Poblacion Delgado St., Calinog, Iloilo

Contact Number: 09287308576

Email: genecaleb.carbonilla@wvsu.edu.ph

**Xyphrus Von Keith V. Caguan (Back End Developer)**

Address: Brgy. Anonang, Leon, Iloilo

Contact Number: 09275594826

Email: xyphrusvonkeith.caguan@wvsu.edu.ph

**Joshreen D. Reyes (Data Specialist)**

Address: Brgy. Bacan, Cabatuan, Iloilo

Contact Number: 09212271740

Email: joshreen.reyes@wvsu.edu.ph

**Jirah Kate C. Solano (Data Analyst)**

Address: Boracay Island, Malay, Aklan

Contact Number: 09219931155

Email: jirahkate.solano@wvsu.edu.ph



**SYRENE**

© Copyright 2023