CHILD PROTECTION MANAGEMENT SYSTEM

ABSTRACT

The CPMIS Chabot is a conversational AI program designed to assist child protection organizations in managing and tracking cases of child abuse and neglect. The Chabot allows users to create, manage, and track cases, retrieve information, generate reports, refer cases to appropriate authorities, and send notifications. The Chabot can be deployed on multiple platforms and integrated with other systems, providing a seamless user experience. With its natural language processing capabilities and security features, the CPMIS Chabot provides an efficient, effective, and secure tool for child protection organizations to provide better support for vulnerable children

CHAPTER ONE: INTRODUCTION

To interact with users in a conversational manner, enabling organizations to manage cases more efficiently and effectively. The CPMIS Chabot is a new and innovative tool that aims to simplify case management processes and improve the accessibility of child protection services. It enables child protection organizations to access a comprehensive case management system through a conversational interface, which can be accessed via multiple platforms such as messaging apps, websites, and social media. The CPMIS Chabot is designed to provide a wide range of functionality, including case tracking, referral management, and reporting. It uses advanced algorithms to analyze data and generate insights that can help organizations to identify patterns and trends in cases of child abuse and neglect. This can help organizations to make more informed decisions and allocate resources more effectively. By providing a conversational interface, the CPMIS Chabot enables organizations to work more collaboratively and effectively, improving the quality of service they provide to vulnerable children. It also helps to increase the accessibility of child protection services by providing a platform that can be accessed by anyone with an internet connection. In the following sections, we will explore the benefits of the CPMIS Chabot in more detail, including improved case management, increased accessibility, and better collaboration. We will also discuss the methodology used to develop the CPMIS Chabot, including requirement analysis, design, development, testing, deployment, integration, and maintenance and support

**1.1 Background of the problem**.

Technologies like catboats have the potential to overcome some of these challenges by providing a more efficient and accessible way of managing cases. By using natural language processing, catboats can understand and respond to user queries in a conversational manner, making it easier for child protection organizations to manage cases and respond to reports of abuse and neglect.

The CPMIS Chabot is a solution designed to address these challenges and provide child protection organizations with a more efficient and effective tool to manage cases of child abuse and neglect.

**1.2 problem statement**

Inefficient, error-prone, and difficult to access, particularly for remote or marginalized communities. This can result in delays in responding to repetitive problem faced, which can have serious consequences for the well-being and safety of children. The CPMIS Chabot aims to provide a more efficient and accessible way of managing cases using conversational AI technologies, making it easier for child protection organizations to respond to challenges faced and provide better children.

To achieve this we have created the following steps to create up the final model

1. Data cleaning
2. Classification of the data
3. Creating a model
4. Model deployment using(streamlit,rasa)

PROJECT DEPENDANCIES

1. Jupyter notebook

2. Python

3. Rasa Framework

**1.3 General objective**

TO develop a virtual assistant Chabot which aims to provide a more efficient and accessible way of managing repetitive problems/question using conversational AI technologies, making it easier for child protection organizations to respond to frequently ask problems faced while using the CPMIS system

**1.3.1 Specific objective**

To cleans the given data. To solve the problem on the repetitive question that are frequently asked in the CPMIS system

To remove all the irrelevant data in the dataset by cleansing the given dataset

To visualize our dataset

To improve the develop the system that improve the response time on the questions asked by the user

**1.4 Justification**

The project aims in developing a virtual assistant that helps to ensure that staff/users receive the support they need while using the CPMIS system, regardless of their location or circumstances.CPMIS virtual assistant is accessible to a wide range of users, including remote and marginalized communities, which can be challenging to reach with traditional case management systems

Support virtual assistant provides a simple way in which a user will be able to access the system

By providing the required support that the user needs.

Repetitive asked questions in the CPMIS, through this virtual assistant the user will be able to get accurate response depending on the problem that they are facing

**1.5 scope and limitation**

**1.51 scope of the project**

The project provides the user with the capability asking any challenges faced while using the system

By using the virtual assistant the user can ask any problem faced while using the CPIMS system, the bot should generate the accurate response that the user ask. The bot provides the user with the steps in which he/she can log into the account, reset password

**1.5.2 Limitation of the problem**

CHAPTER THREE: METHODOLOGY

**2.1 introduction**

This chapter will examine the delve into the software development methodology and the system analysis design methodology that will be used to create the proposed solution. This section will be used in developing the proposed solution

This chapter will also highlight the tools and technique that will be used in developing the software and the expected solution that will be presented upon finalizing the application development

**2.2 software development methodology**

A software methodology refers to a series used in developing a software,

In this project we used the following procedures to develop our project

The following steps were followed

* 1. imported the following libraries

Pandas libraries that will analyze clean and manipulate our dataset

Nltk process text for further analysis

Re regular expression that specifies set of string that matches a given pattern or contain a certain pattern

* 1. creating a list of file to combine the 5 dataset
     1. Creating a function to handle the logs to do the custom log error handling
     2. Losoping through the file name and passing handling\_bad\_line function to the dataset
     3. Concatenating the data frame into one data frame
     4. Removing missing values
     5. Combining the multiple text into one file
  2. **loading our data into a combine WhatsApp text file**
  3. **visualizing our datasets**
  4. **data cleaning**

Removing text from the dataset

Removing urls from the text

Removing phone numbers from the dataset

* 1. **Downloading the WordNet and the Punkt**

WordNet a module in in nltk that is used to find the meaning of word and synonym

Punkt a module in nltk that is used to divide text into sentences

* 1. **Tokenization of the text**

Converting text into a list of words

* 1. **Downloading the stop words**

Stop words are common words which you do not want to use to describe the topic of your content e.g. a, and

Section 1.8: Importing stop words

2.0: Removing the special characters from WhatsApp dataset

2.1: Removing the empty strings from WhatsApp datasets

2.1: Removing the empty strings from WhatsApp datasets

2.2: Saving the cleaned whatsapp\_data as a text file

2.3: Loading the cleaned whatsapp\_data text file to convert it to nlu.md

2.4: Exporting the cleaned\_whatsapp\_data