Mental Health Chat bot documentation

Business Understanding

1. The client /user and their needs described

The clients are in need of a virtual assistant using machine learning techniques with the aim of delivering mental support to kenyans. The chatbot is expected to have the capability to comprehend and evaluate the user's messages, and offer appropriate responses and resources, such as information on mental health conditions, methods of coping, and professional assistance.

2. The client engagement process is provided

This was done through clear reading of client demands on the links provided to us by the ML hackathon instructor: https://arxiv.org/abs/1812.11783

3. The objective of the task

We were tasked with building a chatbot utilizing machine learning techniques to furnish mental health assistance to individuals in Kenya. The chatbot should have the ability to recognize and assess user messages and provide suitable replies and resources, such as details on mental health conditions, coping strategies, and expert assistance.

Data Acquisition

4. Sources clearly described

We used the mental health conversational data downloaded from kaggle, to test and train our chatbot.
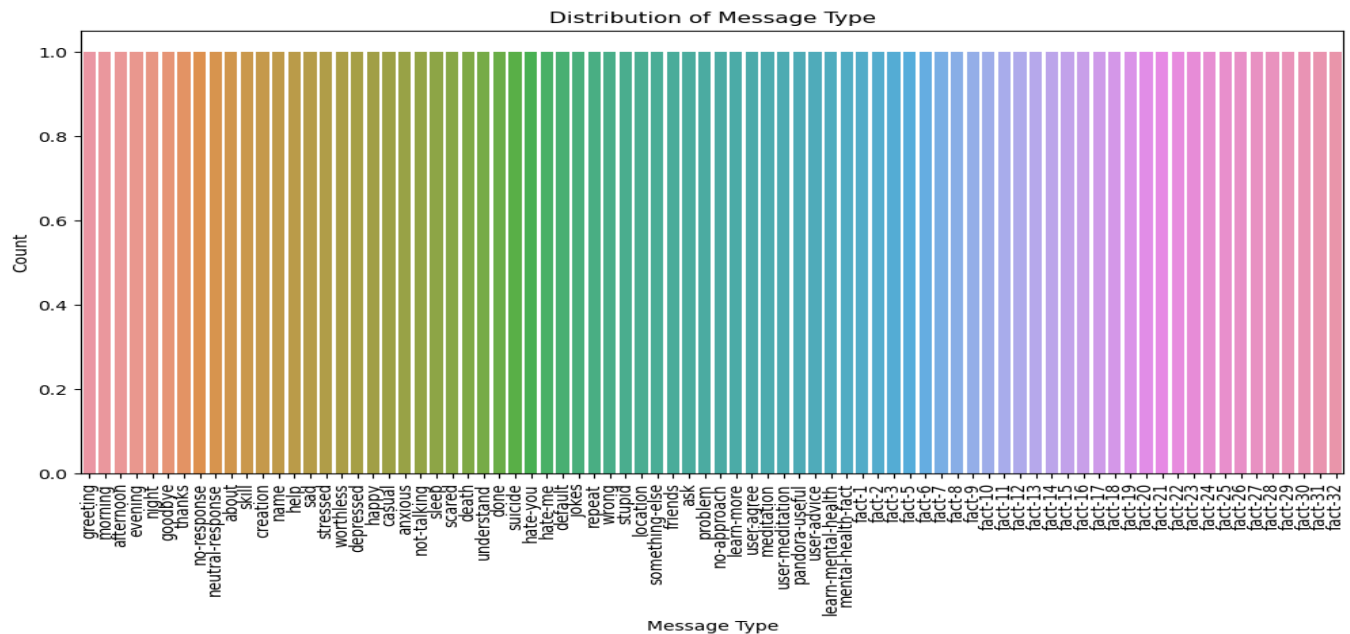
5. Data acquisition process clearly described

Exploratory Data Analysis

6.0 The exploratory data analysis and outcomes

EDA is the process of analyzing and summarizing the main characteristics of a dataset.

The main variable of interest is the message content.

The EDA techniques used included exploratory visualizations, to analyze the trends of the frequently asked questions over the period

Identifying patterns – This involves identifying related words and phrases and analyzing some of the relationship between different responses and questions.

Feature selection – This involved selecting important features that was used to train the chatbot. This was involved selecting some of the most frequent phrases and word to train our model.

Visualizations – This includes use of histograms and box plots to examine the distribution of message type across different intents.