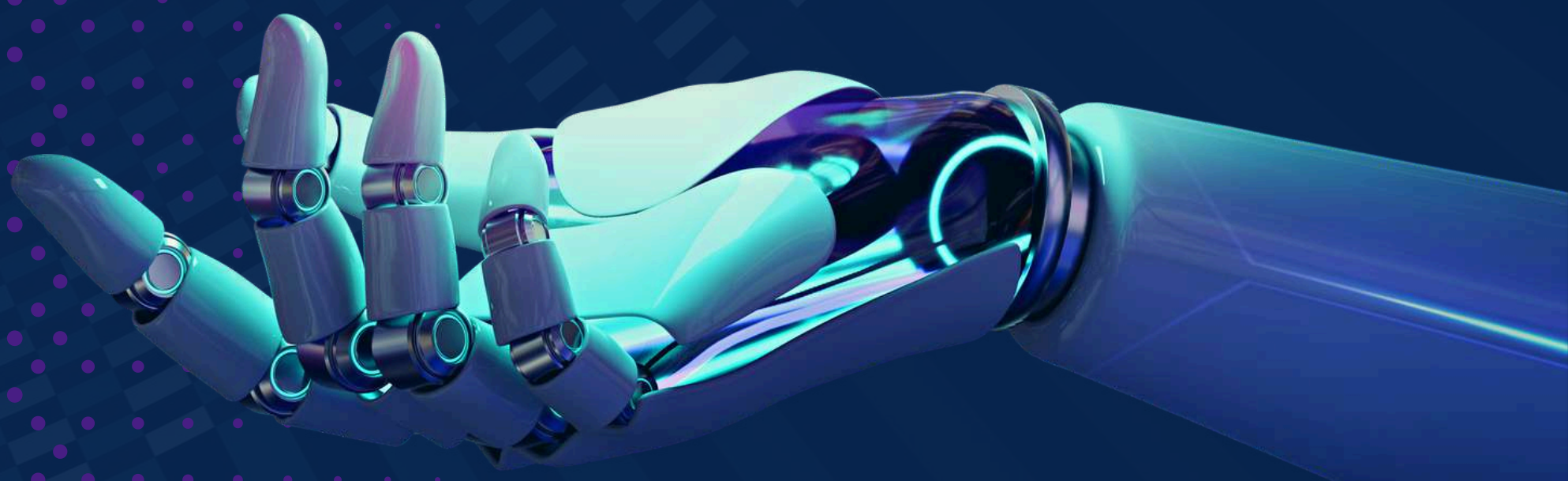
TRANQUILO

ARTIFICIAL INTELLIGENCE SERVICES PROPOSAL



IDENTIFY THE CORE FUNCTIONALITY

- **We are trying to solve the problem of anxiety:**

Anxiety especially generalized anxiety disorder, affects a large number of individuals, leading to persistent worry, physical symptoms, and disruption to daily life Despite the availability of various treatment options, many people struggle to find accessible, personalized support that can guide them through managing their anxiety effectively. Current solutions often lack a comprehensive approach that combines real-time assistance, community support, and personalized interventions ,they also lack artificial intelligence, which is the main point for us.

The use of artificial intelligence within our application is divided into two parts :

01 Build a machine learning model that classifies a user's anxiety severity (GAD) based on survey responses

- Based on the level of concern, personalized recommendations will be made to suit their needs

02 The chatbot program aims to provide users with real-time support and guidance for managing anxiety
This includes offering coping strategies, answering questions, and providing reassurance during times of distress

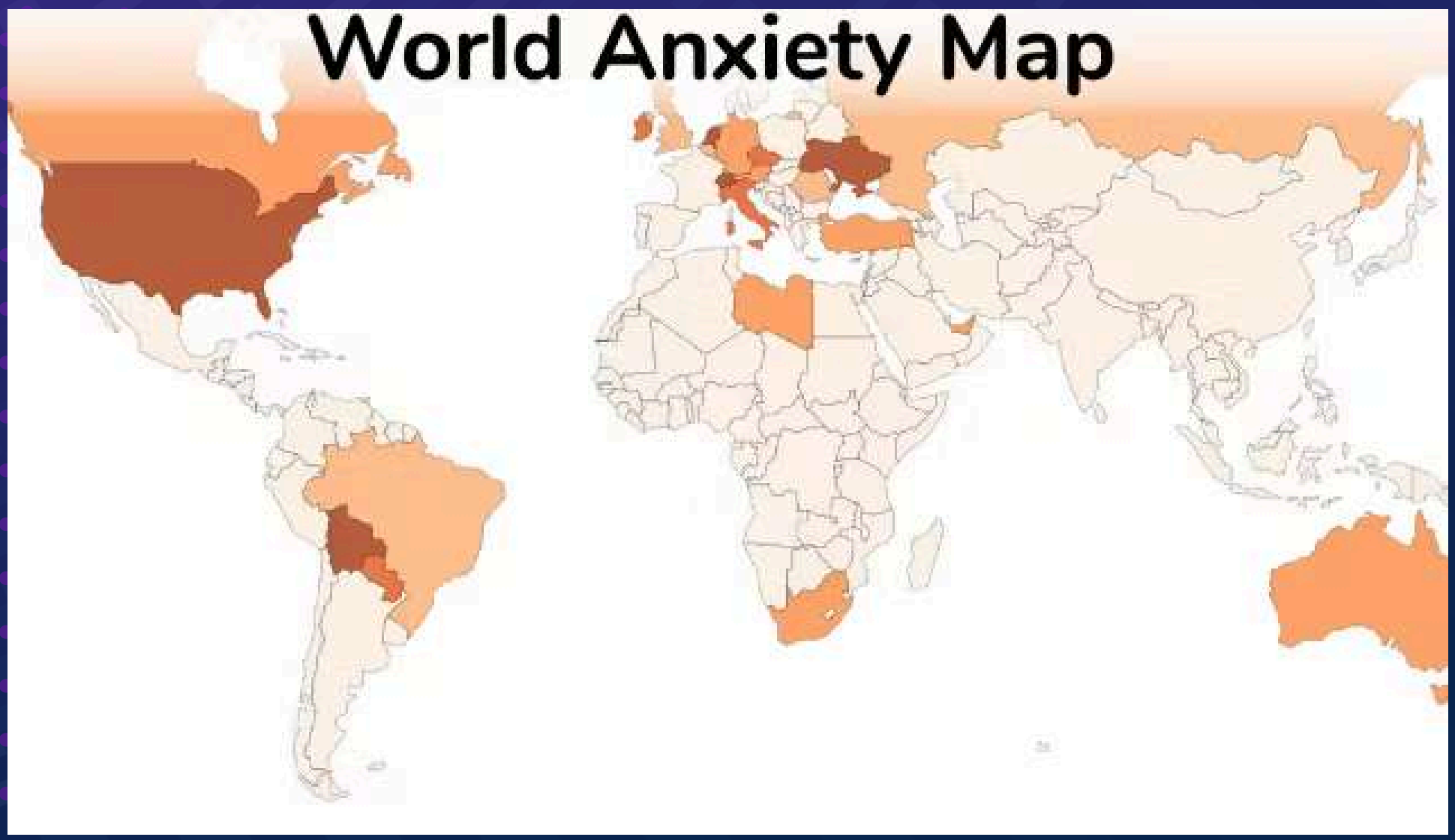
- The chatbot will be designed to interact with users in a conversational manner, making it easier for them to seek help or information whenever they need it

DEFINE AND ANALYSES THE PROBLEM

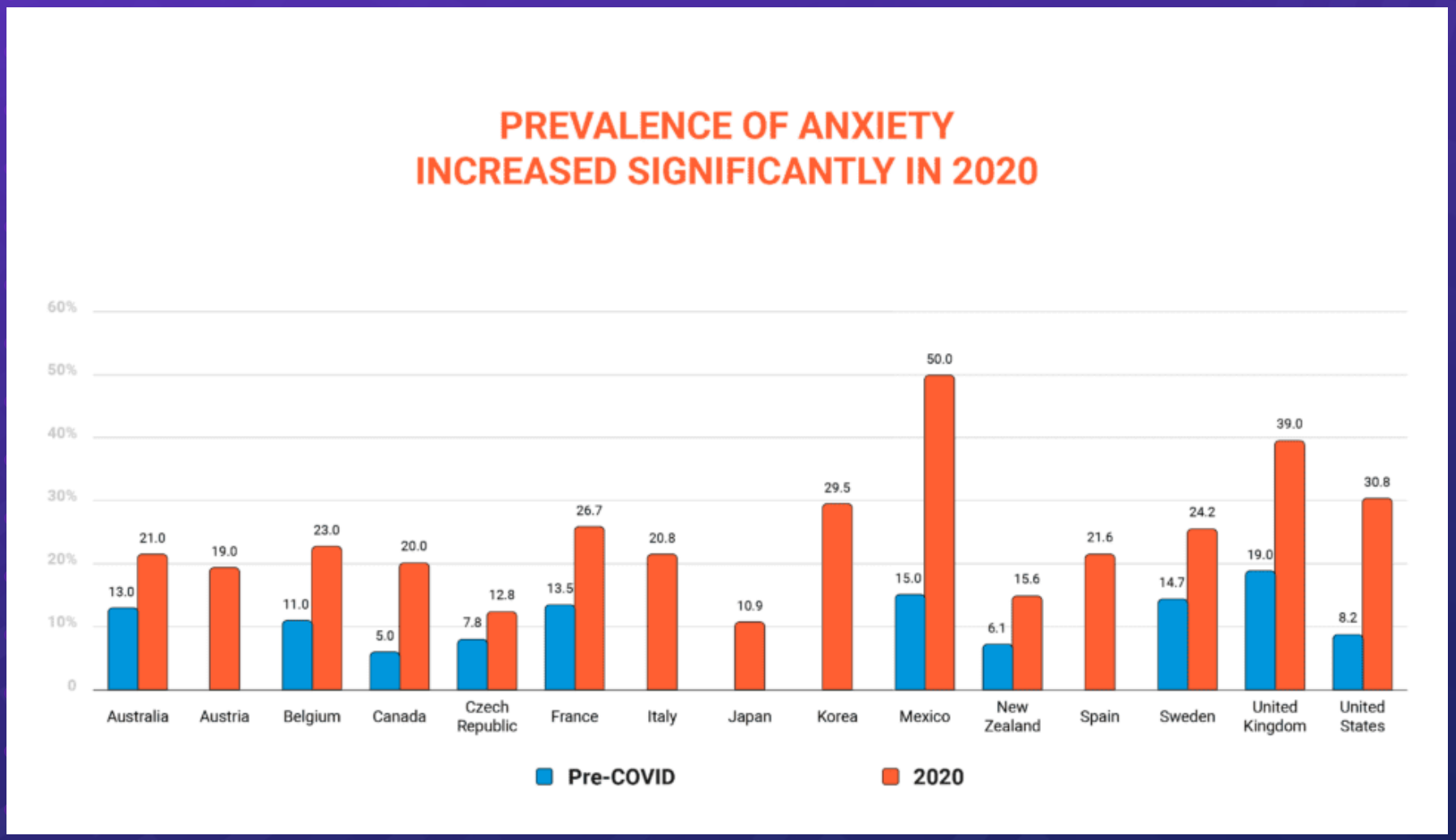
Problem Definition:

Users with anxiety, particularly Generalized Anxiety Disorder (GAD), often experience heightened anxiety in specific situations without immediate access to professional help or personal support. This can lead to increased feelings of isolation and difficulty managing symptoms independently

According to the World Health Organization (WHO), anxiety disorders are among the most common mental health disorders worldwide
It is estimated that approximately **3.6%** of the global population suffers from anxiety disorders

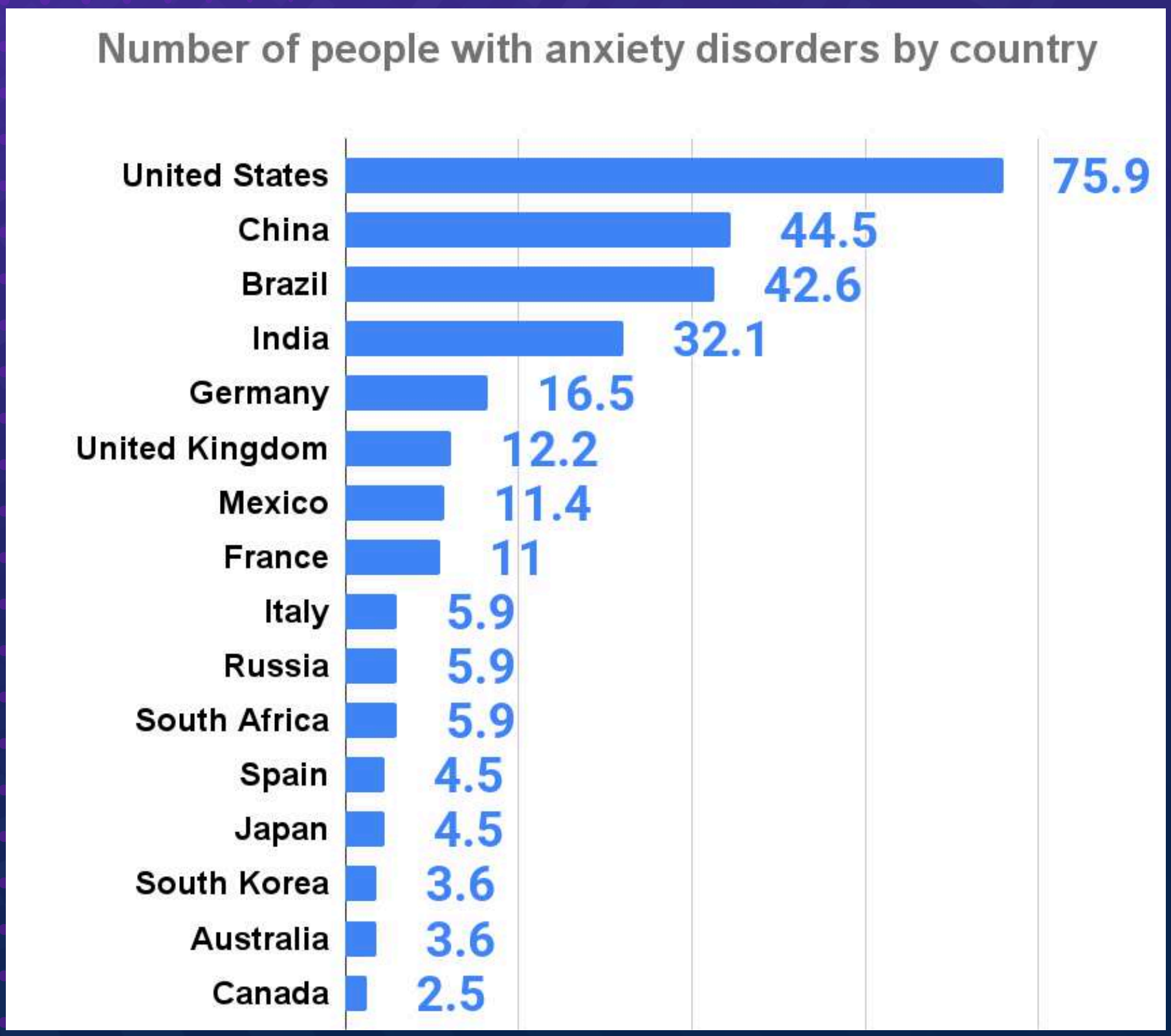


Specifically, after the emergence of the COVID-19 pandemic in 2020, anxiety began to increase



The level of anxiety among students at all educational stages is very high, especially during exam periods

In some countries, the percentage may be higher
For example, in the United States, studies indicate that approximately 18% of adults suffer from anxiety disorders in any given year
The percentage may vary depending on age group, gender, and cultural and environmental factors.began to increase



INSIGHTS

Generalized anxiety (GAD) :
is a common disorder that can greatly impact a person's life, but with proper treatment and support, people with this disorder can learn how to manage their anxiety and live more stable lives

Increasing awareness about generalized anxiety disorder is important to understanding how to deal with it effectively

Accessibility:
Users need a readily accessible tool that can provide immediate assistance whenever they feel anxious

Engagement:
The chatbot must engage users effectively, encouraging regular interaction as part of their anxiety management routine

THE STAGES OF WORK AND THE DATA WE WILL NEED

First about the machine learning model :

1. Data collection:

We started searching for the dataset that we would need to create the machine learning model
we found this dataset and it will help us in what we want.

Dataset Link:

https://www.kaggle.com/datasets/subidit/indicators-of-anxiety-or-depression

2. Data cleaning:
(It will be worked on for about two days)

We will fix anything incorrect in the data to ensure the quality of the model, such as removing missing values and outliers
Using numpy,pandas in python.

3. Exploratory Data Analysis (EDA):
(It will be worked on for about one day)

This step is to understand the data, discover patterns, and analyze the data in a set of charts and descriptive statistics
Using Matplotlib and Seaborn to create graphs and analyze data visually in Python.

4. Data Splitting:
(It will be worked on for about one day)

It is to divide the data into two parts:
(training part) and (test part)
Using train_test_split from scikit-learn library.

5. Model Selection:
(It will be worked on for about one day)

Here we will use the classification model to classify the level of anxiety of the user
Using scikit-learn or TensorFlow to build the model

6. Model training:
(It will be worked on for about one day)

Training the model on the data model we have

7. Model Evaluation:
(It will be worked on for about one day)

To measure the efficiency of the model (ACCURACY)

8. Model Tuning:
(It will be worked on for about one day)

To achieve the highest performance of the model and improve it

9. Deployment

Link the model to the application using flask in python

Thank You