**Visvesvaraya Technological University**

**Jnana Sangama, Belagavi – 590018, Karnataka**



**Python Application Programming**

# **A mini project report on**

### Emotion Predictor & Therapist

**Submitted By:**

**Sakshi Rai 1GA17CS115**

**Aneeq Ul Waseeq 1GA17CS014**

**Under the Guidance of**

**Shushmita R**

**Faculty Dept. Of CSE**



**Department of Computer Science and Engineering**

**(Accredited by NBA 2019-2022)**

**Global Academy of Technology**

**Rajarajeshwarinagar, Bangalore – 560098**

**2019-2020**

**Global Academy of Technology**

**Department of Computer Science and Engineering**



Certificate

This is to certify that the project entitled **”Emotion Predictor & Therapist”** is a bonafide work carried out by **Sakshi Rai(1GA17CS115), Aneeq Ul Waseeq(1GA17CS014)** as a part of assignment in Python Applications Programming in Computer Science and Engineering during the year 2019-2020.

|  |  |  |
| --- | --- | --- |
| **Max. marks** | **Marks obtained** | **Faculty Name and Signature** |
| **07** |  |  |

### ABSTRACT

This app is all about predicting a users emotion based on the feelings user expresses to the app. According to the emotion experienced by the user, the app tries to help them with their emotions by displaying relative and helpful content. To predict the emotions of the user we used natural language processing(NLP) and trained our predictor model using ISEAR data set. Our model can predict up to seven human emotions, which gives us a better prediction and understanding of emotions.

**TABLE OF CONTENTS**

**TOPIC PAGE NO**

**1. INTRODUCTION**

1.1 Python Programming Language

1.2 Applications of Python

**2. SYSTEM REQUIREMENTS**

2.1 Software Requirements

2.2 Hardware Requirements

**3. IMPLEMENTATION AND RESULTS**

3.1 Project Code

3.2. Results

**CONCLUSION**

**REFERENCES**

**ORGANIZATION OF THE REPORT**

The report is divided into various chapters and is organized as follows:

**Chapter 1: Introduction**

This chapter includes brief introduction to Python Programming Language and its applications.

**Chapter 2: System requirements**

This chapter includes details of hardware and software requirements necessary for the execution of the project.

**Chapter 3: Implementation and Results**

This chapter includes the program code of the project and the results of successful runs of the code.

**Conclusion**

This section includes the conclusion about the project.

**References**

This section includes the bibliographical references used for the development of the project.

**CHAPTER 1**

**INTRODUCTION**

* 1. **Python Programming language**

Write a brief introduction of Python programming language and its history

Line spacing: 1.5 lines

Font: Times new Roman, 12pt.

Content should be at least 1 page and maximum 1.5 pages

Paragraph alignment: Justified

First line of every paragraph should have an indent of 0.5”

* 1. **Applications of Python programming language**

Write briefly about various applications of Python

Line spacing: 1.5 lines

Font: Times new Roman, 12pt.

Content should be at least 1 page and maximum 1.5 pages

Paragraph alignment: Justified

First line of every paragraph should have an indent of 0.5”

**CHAPTER 2**

**SYSTEM REQUIREMENTS**

**2.1 Software Requirements**

Line spacing: 1.5 lines

Font: Times new Roman, 12pt.

**2.2 Hardware Requirements**

Line spacing: 1.5 lines

Font: Times new Roman, 12pt.

**CHAPTER 3**

**IMPLEMENTATION AND RESULTS**

**3.1 About Project**

Write description about what is being demonstrated in the project.

Line spacing: 1.5 lines

Font: Times new Roman, 12pt.

Content should be limited to 1 page only.

Paragraph alignment: Justified

First line of every paragraph should have an indent of 0.5”

**3.2 Project code**

**Python code**

import numpy as np #importing neccessary lib  
from flask import Flask, request, jsonify, render\_template #used flask for server  
import pickle  
from sklearn.externals import joblib  
app = Flask(\_\_name\_\_)  
@app.route('/') #redirects to the main page when app is started  
def home():  
 return render\_template('index.html')  
  
@app.route('/predict',methods=['POST']) #this function predicts the emotion based on input  
def predict():  
 import pandas as pd  
 from sklearn.feature\_extraction.text import CountVectorizer  
 from sklearn.naive\_bayes import MultinomialNB  
 data = pd.read\_csv("ISEAR2.csv") #training dataset is loaded  
 def simple\_split(data, y, length, split\_mark=0.95): #95% data is used to train the model  
 if split\_mark > 0. and split\_mark < 1.0:  
 n = int(split\_mark \* length)  
 else:  
 n = int(split\_mark)  
 xtrain = data[:n].copy()  
 xtest = data[n:].copy()  
 ytrain = y[:n].copy()  
 ytest = y[n:].copy()  
 return xtrain, xtest, ytrain, ytest  
  
 vectorizer = CountVectorizer()  
 xtrain, xtest, ytrain, ytest = simple\_split(data.text, data.emotion, len(data))  
 xtrain = vectorizer.fit\_transform(xtrain)  
 xtest = vectorizer.transform(xtest)  
 mnb = MultinomialNB()  
 mnb.fit(xtrain, ytrain)  
 if request.method == 'POST':  
 emotion = request.form['emotion']  
 data1 = [emotion]  
 vect = vectorizer.transform(data1)  
 my\_prediction = mnb.predict(vect) #here the predicted emotion is stored  
 if my\_prediction == 'sadness': #these if statements redirect user to web pages according to their predicted emotions.  
 return render\_template('sadness.html', prediction=my\_prediction)  
 if my\_prediction == 'joy':  
 return render\_template('joy.html', prediction=my\_prediction)  
 if my\_prediction == 'anger':  
 return render\_template('anger.html', prediction=my\_prediction)  
 if my\_prediction == 'disgust':  
 return render\_template('anger.html', prediction=my\_prediction)  
 if my\_prediction == 'fear':  
 return render\_template('fear.html', prediction=my\_prediction)  
 if my\_prediction == 'guilt':  
 return render\_template('shame.html', prediction=my\_prediction)  
 if my\_prediction == 'shame':  
 return render\_template('shame.html', prediction=my\_prediction)  
  
  
if \_\_name\_\_ == "\_\_main\_\_":  
 app.run(debug=True)

**index.html**

<html>  
<head>  
<title>Student form</title>  
<style type="text/css">  
body {  
margin: 0;  
background :url('http://www.gat.ac.in/wp-content/uploads/2016/11/3-2.jpg');  
background-size:cover;  
}  
h1 {  
font-family: cursive;  
background-color: #000;  
color:white;  
text-align: center;  
padding: 20px;  
}  
h3 {  
font-family: cursive;  
background-color: #000;  
color:white;  
text-align: center;  
padding: 20px;  
}  
div {  
width: 400px;  
margin: 10px auto;  
box-shadow: 0px 1px 10px #404040;  
background: rgba(255, 255, 255, 0.2);  
border-color:double;  
border-size:100px;  
border-radius: 15px 50px;  
padding-bottom: 10px;  
}  
a {  
padding: 30px;  
margin: 30px;  
border-radius: 10px;  
background-color: black;  
text-decoration: none;  
display: inline-block;  
color: #fff;  
font-family: cursive;  
}  
a:hover {  
background-color: #cccccc;  
transition: all 0.3s  
}  
input[type=Submit]{  
background-color:black ;  
border: none;  
color: white;  
padding: 16px 32px;  
text-decoration: none;  
margin: 4px 2px;  
cursor: pointer;  
font-family: cursive;  
}  
</style>  
</head>  
<body>  
<form action="{{ url\_for('predict')}}" method="post">  
<h1>EMOTION PREDICTOR & THERAPIST</h1>  
<h3>This app helps you with your feelings, you can express yourself and it helps you to be yourself.</h3>  
<div align="center">  
<a>Tell us what's going on your mind?<input type="text" name ="emotion"></a></br>  
<input type="Submit" value="Go">  
 <div>{{ prediction }}</div>  
</div>  
</form>  
</div>  
</body>  
</html>

**Joy.html**

<html>  
<head>  
 <title>Student form</title>  
 <style type="text/css">  
 body {  
 margin: 0;  
 background: linear-gradient(rgba(255, 255, 255, 0.3), rgba(255, 255, 255, 0.3));  
 background-size: cover;  
 }  
  
 p {  
 font-family: cursive;  
 color: black;  
 text-align: center;  
 padding: 2px;  
 font-weight: bold;  
 font-size: 25px;  
 }  
  
 h1 {  
 font-family: cursive;  
 background-color: #000;  
 color: white;  
 text-align: center;  
 padding: 20px;  
 }  
  
 div {  
 width: 400px;  
 margin: 10px auto;  
 }  
  
 a {  
 padding: 30px;  
 margin: 30px;  
 border-radius: 10px;  
 background-color: black;  
 text-decoration: none;  
 display: inline-block;  
 color: #fff;  
 font-family: cursive;  
 }  
  
 a:hover {  
 background-color: #cccccc;  
 transition: all 0.3s  
 }  
  
 input[type=Submit] {  
 background-color: black;  
 border: none;  
 color: white;  
 padding: 16px 32px;  
 text-decoration: none;  
 margin: 4px 2px;  
 cursor: pointer;  
 font-family: cursive;  
 }  
  
 td {  
 padding: 10px;  
  
 }  
 </style>  
</head>  
<body>  
 <form action="{{ url\_for('predict')}}" method="post">  
 <h1>EMOTION PREDICTOR & THERAPIST</h1>  
  
 </form></br></br>  
 <table align="center" border=2>  
 <div align="center">  
 <p>You are feeling :{{ prediction }}</p>  
 </div>  
 </table>  
 <p>Here have a look at these:</p>  
  
 <table align="center">  
 <tr>  
 <td><img src="https://messages.365greetings.com/wp-content/uploads/2018/03/feel-good-quotes-01.jpg  
"  
 width="300" height="240"></td>  
 <td><img src="https://winkgo.com/wp-content/uploads/2019/03/happy-memes-make-you-smile-more-31-720x680.jpg"  
 width="300" height="240"></td>  
 <td><img src="https://images-na.ssl-images-amazon.com/images/I/81sPhCNa79L.jpg"  
 width="300" height="240"></td>  
 </tr>  
 </table>  
 <table align="center">  
 <tr>  
 <td><img src="https://i.pinimg.com/736x/a0/69/2c/a0692c97b88872640a433e6fad5ecd45.jpg"  
 width="300" height="240"></td>  
  
 <td><img src="https://aknextphase.com/wp-content/uploads/2017/11/Share-Your-Joy.jpg"  
 width="300" height="240"></td>  
 </tr>  
 </table>  
 <table align="center">  
 <tr>  
  
 <td><img src="https://image.freepik.com/free-vector/cute-rabbit-bunny-lover-couple-greeting-cartoon-doodle-wallpaper\_40564-338.jpg  
"  
 width="300" height="240"></td>  
 </tr>  
 </table>  
  
 <div>  
 <p>You can also have a look at these following videos:</p>  
 <p><a href="https://www.youtube.com/watch?v=71hqRT9U0wg">If You're Happy and you know it!!!</a></p>  
 <p><a href="https://www.youtube.com/watch?v=8KkKuTCFvzI">Here's something inspiring!!</a></p>  
  
  
 </div>  
 <p><a href="/">Let's see how you are feeling now.</a></p>  
 </div>  
</body>  
  
</html>

**3.3 Results**

Add snapshots taken from successful runs of the project(min. 4 and max. 6 snapshots).

Every snapshot to be labeled as follows

**Snapshot 3.1: \_\_\_\_\_\_\_**

**Snapshot 3.2: \_\_\_\_\_\_\_**

Snapshot label should be bold and center aligned.

Font: Times New Roman, 10pt.

**CONCLUSION**

We learned about many concepts and application of python language namely, NLP using NLTK library, Tensorflow library for deep learning, web development for front end. Generating model to train our data set using AI. Time management is one of the main skills we used to plan and develop our project. We designated team members with deadlines for each module to be developed. This helped us to complete the project on time.

Write a brief description of the concepts that were learnt during the project.

Also write about other skills like time management, team work and so on.

Line spacing: 1.5 lines

Font: Times new Roman, 12pt.

Content should be max. 250 words.

Paragraph alignment: Justified

First line of every paragraph should have an indent of 0.5”

**REFERENCES**

**Bibliography:**

[1]

[2]

[3]

**Websites:**

[1]

[2]

[3]

Bibliography must include the text book names prescribed by the university [refer syllabus copy for the same]

Website references must not include [www.google.com](http://www.google.com)

Max. no of references allowed is 5 in each category and min. references allowed is 3

Line spacing: 1.5 lines

Font: Times new Roman, 12pt.

Paragraph alignment: Justified

**Note:**

1. **The entire report must not exceed 20 pages.**
2. **Students are required to submit final copy of the report on Day 3 after college reopens (e.g. if college reopens on Monday, report is to be submitted on Wednesday morning before 9.00am) mandatorily.**
3. **Marks will be evaluated after the student demonstrates the working of the project (schedule for the same will be announced in class).**
4. **No draft copy will be accepted.**