ANONYMOUS WEATHER DEDUCTION

A PROJECT REPORT

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KAVARAIPETTAI – 601 206
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BONAFIDE CERTIFICATE

Certified that this project report "**ANONYMOUS WEATHER DEDUCTION**" is the bonafide work of **"**

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ABSTRACT

Weather forecasting is the attempt by meteorologists to predict the **weather** conditions at some future time and the **weather** conditions that may be expected. The climatic condition parameters are based on the temperature, wind, humidity, rainfall and size of the data set.
In this modern era everything is being digitized, but we cannot liable on them,so this project predicts the weather forecasting of the area anonymously .The main idea of the project is PRIVACY along with EFFICIENCY

Weather forecasting is the application of science and technology to predict the state of the atmosphere for a given location.Ancient weather forecasting methods usually relied on observed patterns of events, also termed pattern recognition. For example, it might be observed that if the sunset was particularly red, the following day often brought fair weather.However, not all of these predictions prove reliable.

Here this system will predict weather based on parameters such as temperature, humidity and wind. User will enter the location ,System will take this parameter and will predict the weather. Weather forecasting system takes parameters such as temperature, humidity, and wind and will forecast weather. This system can be used in Air Traffic, Marine, Agriculture, Forestry, Military, and Navy etc.

1.1. Introduction

Rainfall Prediction is the application of science and technology to predict the amount of rainfall over a region. It is important to exactly determine the rainfall for effective use of water resources, crop productivity and pre-planning of water structures.

In this project, we used Linear Regression to predict the amount of rainfall. Linear Regression tells us how many inches of rainfall we can expect.

1.2 Problem Definition

It is important to exactly determine the rainfall for effective use of water resources, crop productivity and pre-planning of water structure.

3. Scope

It tells us how many inches of rainfall we can expect.

4.MODULE USED:

gtts module:

- There are several APIs available to convert text to speech
- in Python.

- One of such APIs is the Google Text to Speech API
- commonly known as the gTTS API.

- gTTS is a very easy to use tool which converts the text

- entered, into audio which can be saved as a mp3 file.
- The gTTS API supports several languages including
- English, Hindi, Tamil, French, German and many more.
- The speech can be delivered in any one of the two
- available audio speeds, fast or slow
- However, as of the latest update, it is not possible to
- change the voice of the generated audio.

IPython module:

- IPython provides a rich toolkit to help you make the most
- out of using Python interactively. Its main components are:
- A powerful interactive Python shell
- A Jupyter kernel to work with Python code in Jupyter
- notebooks and other interactive frontends.

The enhanced interactive Python shells have the following main features:

- Comprehensive object introspection.

- Input history, persistent across sessions.

- Caching of output results during a session with automatically
- generated references.

- Access to the system shell with user-extensible alias system.
- Easily embeddable in other Python programs and GUIs.

bs4 module:

- Beautiful Soup(bs4) is a Python library for pulling data out of HTML and XML files.
- It works with your favorite parser to provide idiomatic
- ways of navigating, searching, and modifying the parse tree.
- It commonly saves programmers hours or days of work.

Request module:

- The Request module allows you to send HTTP requests using Python.
- The HTTP request returns a Response Object with all the response
- data (content, encoding, status, etc).
-
- It is an easy-to-use library with a lot of features ranging from
- passing parameters in URLs to sending custom headers and SSL Verification.

Play sound module:

- The playsound module contains only one thing - the function (also
- named) playsound.
-
- It requires one argument - the path to the file with the sound you'd like
- to play. This may be a local file, or a URL.
-
- There's an optional second argument, block, which is set to True by
- default. Setting it to False makes the function run asynchronously.
-
- On Windows, uses windll.winmm. WAVE and MP3 have been tested
- and are known to work. Other file formats may work as well.

Tkinter module:

- Python offers multiple options for developing GUI (Graphical User

- Interface).
- Out of all the GUI methods, tkinter is the most commonly used method.
-
- It is a standard Python interface to the Tk GUI toolkit shipped with
- Python.
-
- Python with tkinter is the fastest and easiest way to create the GUI
- applications.
-
- Creating a GUI using tkinter is an easy task.

1.4 Purpose

There are several reasons why weather forecasts are important. They would certainly be missed if they were not there. It is a product of science that impacts the lives of many people. The following is a list of various reasons why weather forecasts are important:

1. Helps people prepare for how to dress (i.e. warm weather, cold weather, windy weather, rainy weather)
2. Helps businesses and people plan for power production and how much power to use (i.e. power companies, where to set thermostat)
3. Helps people prepare if they need to take extra gear to prepare for the weather (i.e. umbrella, rain coat, sun screen)
4. Helps people plan outdoor activities (i.e. to see if rain/storms/cold weather will impact outdoor event)
5. Helps curious people to know what sort of weather can be expected (i.e. a snow on the way, severe storms)
6. Helps businesses plan for transportation hazards that can result from the weather (i.e. fog, snow, ice, storms, clouds as it relates to driving and flying for example)
7. Helps people with health related issues to plan the day (i.e. allergies, asthma, heat stress)
8. Helps businesses and people plan for severe weather and other weather hazards (lightning, hail,

tornadoes, hurricanes, ice storms)

9. Helps farmers and gardeners plan for crop irrigation and protection (irrigation scheduling, freeze protection)

1.6 Proposed System

Here this system will predict weather based on parameters such as temperature, humidity and wind. User will enter the location ,System will take this parameter and will predict the weather. Weather forecasting system takes parameters such as temperature, humidity, and wind and will forecast weather. This system can be used in Air Traffic, Marine, Agriculture, Forestry, Military, and Navy etc.

2.REQUIREMENTS

2.1. Platform Requirements

Hardware/Software	Hardware / Software element	Specification /version
Hardware	Processor	i3
	RAM	2GB
	Hard Disk	250GB
Software	OS	Windows,Linux.
	Python IDE Microsoft Azure	Jupyter NoteBook. Python 3.

3.DESIGN AND IMPLEMENTATION

3.2Source Code

```
from gtts import gTTS
from playsound import playsound
from IPython.display import Audio
from playsound import playsound
import pyttsx3
from bs4 import BeautifulSoup
import requests
from tkinter import *
from tkinter import messagebox
import turtle

tts = gTTS("This project is done by team alphacoders")
tts.save('3.wav')
sound_file_3 = '3.wav'
playsound(sound_file_3)

headers = {
    'User-Agent': 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/58.0.3029.110 Safari/537.3'}
```

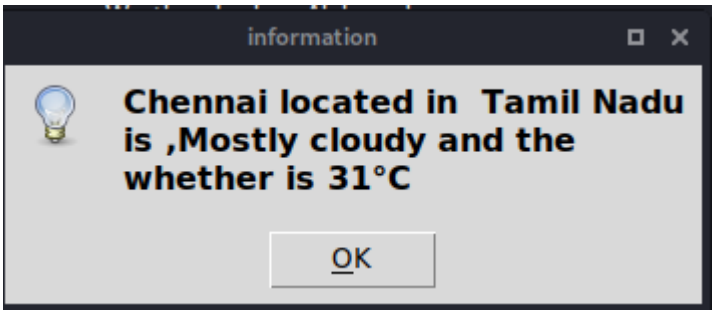
```
def help():
    tts = gTTS("Thanks vedhaa ,Haneesh ,and sunanth for programming me")
    tts.save('4.wav')
    sound_file_4 = '4.wav'
    playsound(sound_file_4)
    messagebox.showinfo("Thanks", "Thanks")
    turtle.color('black')
    style = ('Arial', 30, 'italic')
    turtle.write('ALPHA CODERS!!', font=style, align='center')
    j = input()
    if j.isalpha(): exit()

    turtle.hideturtle()

    exit()



def hel():
    k = e1.get()
    weather(k)
```

```
def weather(city):
        city += " weather"
        # Weather detection funtion starts
        try:
        l = []
        city = city.replace(" ", "+")
        res = requests.get(

f'https://www.google.com/search?q={city}&oq={city}&aqs=chrome.0.35i39l2j0l4j46j69i60.6128j1j7
&sourceid=chrome&ie=UTF-8',
        headers=headers)
        print("Searching in google.....\n")
        soup = BeautifulSoup(res.text, 'html.parser')
        location = soup.select('#wob_loc')[0].getText().strip()
        time = soup.select('#wob_dts')[0].getText().strip()
        info = soup.select('#wob_dc')[0].getText().strip()
        weather = soup.select('#wob_tm')[0].getText().strip()
        print(location)
        print(time)
        print(info)
        print(weather + "°C")
        print(location)
        splitted = location.split(",")
```

```
        # print(splitted)
        l = splitted[0] + " located in " + " ".join(
        splitted[1:]) + " is ," + info + " and the whether is " + weather + "°C"
        # l=[location,",",time,",",info,",",weather+"°F"]
        except:
        print("Hey you entered a wrong area! please.. check again ")
        l = ["Hey you entered a wrong area! please.. check again"]
        tts = gTTS("".join(l))
        tts.save('1.wav')
        sound_file = '1.wav'

        playsound(sound_file)
        messagebox.showinfo("information", l)



master = Tk()
master.title("Weather checker - Alpha coders")
# master.geometry("500x200")
Label(master, text='Enter city: ').grid(row=0)
tts = gTTS("Enter city")
tts.save('2.wav')
sound_file = '2.wav'
playsound(sound_file)
```

```
e1 = Entry(master)

e1.grid(row=0, column=1, columnspan=10, sticky=W)

print("hello" + e1.get())


b = Button(master, text="Get temperature", command=hel)

b.grid(row=2, column=1)


b1 = Button(master, text='Quit', command=help).grid(row=4, column=1)


mainloop()
```

OUTPUT:



CONCLUSION:

- This project helps the user to get the information about
- the weather in particular city based on user inputs.

- This project also contains audio facilities to make it as user friendly.

- This project is simple and effective to get the temperature
- and other details of particular city given by the user.