

# Delhi Weather Prediction Web App

This is a Flask-based web application that predicts the temperature (in Celsius) in Delhi using input features like humidity, wind speed, pressure, month, and day of the year. The prediction is powered by a pre-trained machine learning model.

## Features

- User-friendly web interface
- Predicts Delhi temperature based on 5 inputs
- Uses a trained machine learning model (delhi\_weather\_model.pkl) and a feature scaler (feature\_scaler.pkl)

## Files

- app.py: Main Flask application
- delhi\_weather\_model.pkl: Trained machine learning model (serialized with joblib)
- feature\_scaler.pkl: Pre-fitted feature scaler (e.g., StandardScaler or MinMaxScaler)
- templates/index.html: HTML form for user inputs

## Requirements

- Python 3.x
- Flask
- NumPy
- scikit-learn
- joblib

Install requirements:

```
pip install flask numpy scikit-learn joblib
```

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## How to Run

1. Ensure all files (app.py, delhi\_weather\_model.pkl, feature\_scaler.pkl, and the templates/ folder) are in the same directory.

2. Run the Flask app:

```
python app.py
```

3. Open your browser and go to <http://127.0.0.1:5000>

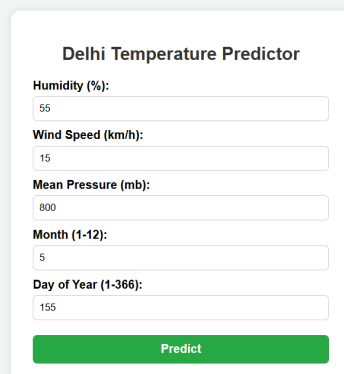
## Usage

1. Enter the following inputs:

- Humidity
- Wind Speed
- Mean Pressure
- Month (1-12)
- Day of Year (1-365)

2. Submit the form to get the predicted temperature in Celsius.

## Input Form Example:



The screenshot shows a web form titled "Delhi Temperature Predictor". It contains six input fields, each with a label and a value: "Humidity (%):" with "55", "Wind Speed (km/h):" with "15", "Mean Pressure (mb):" with "800", "Month (1-12):" with "5", and "Day of Year (1-366):" with "155". At the bottom of the form is a green button labeled "Predict".

Input Field	Value
Humidity (%)	55
Wind Speed (km/h)	15
Mean Pressure (mb)	800
Month (1-12)	5
Day of Year (1-366)	155

Predict

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## Prediction Result Example:

Delhi Temperature Predictor

Humidity (%):

Wind Speed (km/h):

Mean Pressure (mb):

Month (1-12):

Day of Year (1-366):

Predict

Predicted Temperature: 33.27 °C