INDRODUCTION

Pattern is everything around in is digital world. Apattern can either be seen physically or it can be observed mathematically by applying algorithems.

Example: The colors on the clothes,speech pattern,etc. In computer science, a pattern is represented using vector feature values.

*In classification, an appropriate class label is assigned to a pattern based on an abstraction that is generated using a set of training patterns or domain knowledge.classification is used in supervised learning.

*Clustering generated a partition of the data which helps decision making, the specific decision_making activity of in

Overview

☒ **Pattern recognition and machine learning detect arrangements of characteristics of data that uncover information about a given data set or system and is characterized by these four qualities:**
- It learns from data
- It automatically recognizes patterns even if partially visible
- It can recognize familiar patterns
- The recognition comes from different shapes and angles

☒ People also ask

What is pattern recognition?What is Pattern Recognition? Pattern recognition is the process of recognizing patterns by using a machine learning algorithm. Pattern recognition can be defined as the classification of data based on knowledge already gained or on statistical information extracted from patterns and/or their representation.+

PURPOSE;

Pattern recognition identifies and **predicts even the smallest of the hidden or untraceable data**. It helps in the classification of unseen data. It makes suitable predictions using learning techniques. It recognizes and identifies an object at varying distances.

Pattern recognition possesses the following features:
- Pattern recognition system should recognize familiar patterns quickly and accurate
- Recognize and classify unfamiliar objects
- Accurately recognize shapes and objects from different angles
- Identify patterns and objects even when partly hidden
- Recognize patterns quickly with ease, and with automaticity.

LITERATURE SURVEY:

Literary Analysis: Patterns

The following materials, adapted from Joanna Wolfe and Laura Wilder's *Digging into Literature: Strategies for Reading, Writing, and Analysis* (Boston: Beford/St. Martin's, 2016), describe a technique for supporting a surface/depth claim (of the sort described in the "Literary Analysis: Surface/Depth" tab). This is a technique, in other words, for uncovering evidence that can be used to argue for the "depth" insights in your surface/depth central claim.

The **patterns strategy** involves pointing out multiple examples (both obvious and nonobvious) of an image, idea, linguistic feature, or other recurrent element in the

text in order to support a surface/depth argument. It both provides the textual evidence for a surface/depth argument and is a strategy for discovering new surface/depth interpretations.

The patterns strategy illustrates a text's complexity by showing that evidence for a surface/depth argument can be found throughout a text—even in small details where it is unexpected. Patterns and surface/depth go hand in hand: by showing that evidence of an interpretation is present even in small, easily overlooked details in the text, the critic persuades the reader than an interpretation is plausible.

THEORITICAL ANALYSIS:

☒ Theoretical analysis is **a process of examining a theory or a concept by breaking it down into parts and exploring their relationships, strengths, weaknesses, and implications**[12]. It can be used for various purposes, such as predicting outcomes, guiding experimental programs, drawing conclusions, developing or refining theories, and informing practice[1234]. Theoretical analysis can be applied to different fields and topics, such as communication, social research, health research, and nursing

FEEDBACK

☒ People also ask

What is theory analysis?Each of the steps are interdependent on the results of the others.×Each step stands alone in theory analysis and yet each is related to the other. ×Theory analysis consists of systematically examining a theory for its origins, meaning, logical adequacy, usefulness, generalizability/parsimony, and testability. ×Theory analysis. Summary

Theory analysis - SlideShare

What is theoretical research?Theoretical Research: Definition, Methods + Examples Research is the **careful study of a particular problem or concern using the scientific method**. A theory is essential for any research project because it

gives it direction and helps prove or disprove something. Theoretical basis helps us figure out how things work and why we do certain things.

[Theoretical Research: Definition, Methods + Examples](#)

What is the difference between conceptual analysis and theoretical analysis?So theoretical analysis would be on a grander scale whereas conceptual analysis would delve more deeply into the definitilons and ideas that are used to build theory. Carl Hemple is a positivist so for scholars with a different orientation, this insight may not apply.[What is the difference between literature review, theoretical analysis](#)

What is the importance of theory in research?A theory is essential for any research project because it **gives it direction and helps prove or disprove something.** Theoretical basis helps us figure out how things work and why we do certain things. Theoretical research lets you examine and discuss a research object using philosophical ideas and abstract theoretical structures.

[Theoretical Research: Definition, Methods + Examples](#)

☒ [Principles of Theoretical Analysis - JSTOR](#)

Webtheoretical analysis, the goal is **to develop a theory that is at once simple and fruitful, a theory, that is, with a minimum of postulates and a maximum of predictions,** the latter including predictions for phenomena or rela-tionships not yet observed. For empirical …

HARDWARE/SOFTWARE DESIGNING:

Design patterns are used to represent some of the best practices adapted by experienced object-oriented software developers. A design pattern systematically names, motivates, and explains a general design that addresses a recurring design problem in object-oriented systems. It describes the problem, the solution, when to apply the solution, and its consequences. It also gives implementation hints and examples.

[Recent Articles on Design Patterns](#)
Some of the popular design patterns:
- [Design Patterns | Set 1 (Introduction)](#)
- [Design Patterns | Set 2 (Factory Method)](#)
- [Observer Pattern | Set 1 (Introduction)](#)

SOFTWARE DESIGNING:

In software engineering, a design pattern is a general, reusable solution to a commonly occurring problem in software design. It is not a finished design that can be transformed directly into code, but rather a description or template for how to solve a problem that can be used in many different situations. Design patterns are used to support object-oriented programming and are divided into three main types: **Creational, Structural, and Behavioral**, with many sub design patterns within those types.Design patterns are not algorithms or code, but rather an approach to thinking about software design that incorporates the experience of developers who've had similar problems and fundamental design principles.

EXPRERIMENTEL INVESTICATION IMPORTING AND READING THE DATASET:

In software engineering, a design pattern is a general, reusable solution to a commonly occurring problem in software design. It is not a finished design that can be transformed directly into code, but rather a description or template for how to solve a problem that can be used in many different situations. Design patterns are used to support object-oriented programming and are divided into three main types: Creational, Structural, and Behavioral, with many sub design patterns within those types. Design patterns are not algorithms or code, but rather an approach to thinking about software design that incorporates the experience of developers who've had similar problems and fundamental design principles.
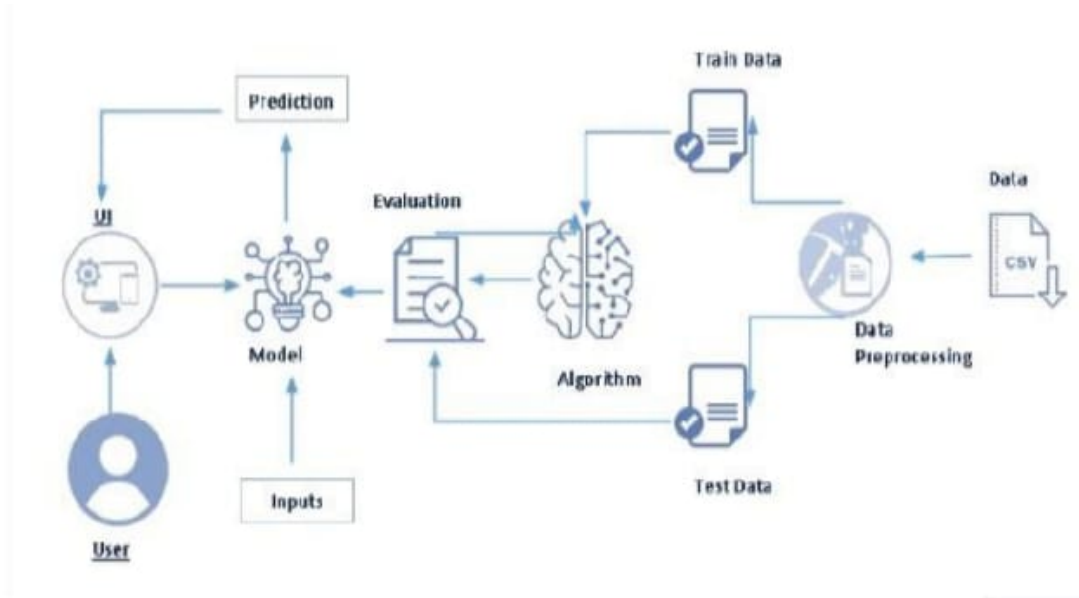
READING THE DATASET:

1.Data visualization.

2.collabrative and filtering

3.creating the model.

4.Test and save the model.

5.Buil python code.

6.Build HTML code.

7.Run the application

We are thefollowing above sectionns we did and investigate it.

FLOWCHART:-

FLOWCHART OF THE PROJECT:-

Project Flow:-

*user interacts with the to upload the input feature

*uploade feature/input is analysed by the model which is integrated

- Data collection
  - o   Collect the dataset or create the dataset
- Visualizing and analyzing data
  - o   Univariate analysis
  - o   Bivariate analysis
  - o   Multivariate analysis
  - o   Descriptive analysis
- Data pre-processing
  - o   Checking for null values
  - o   Handling outlier
  - o   Handling categorical data
  - o   Splitting data into train and test

- Model building
    - o Import the model building libraries
    - o Initializing the model
    - o Training and testing the model
    - o Evaluating performance of model
    - o Save the model
- Application Building
    - o Create an HTML file
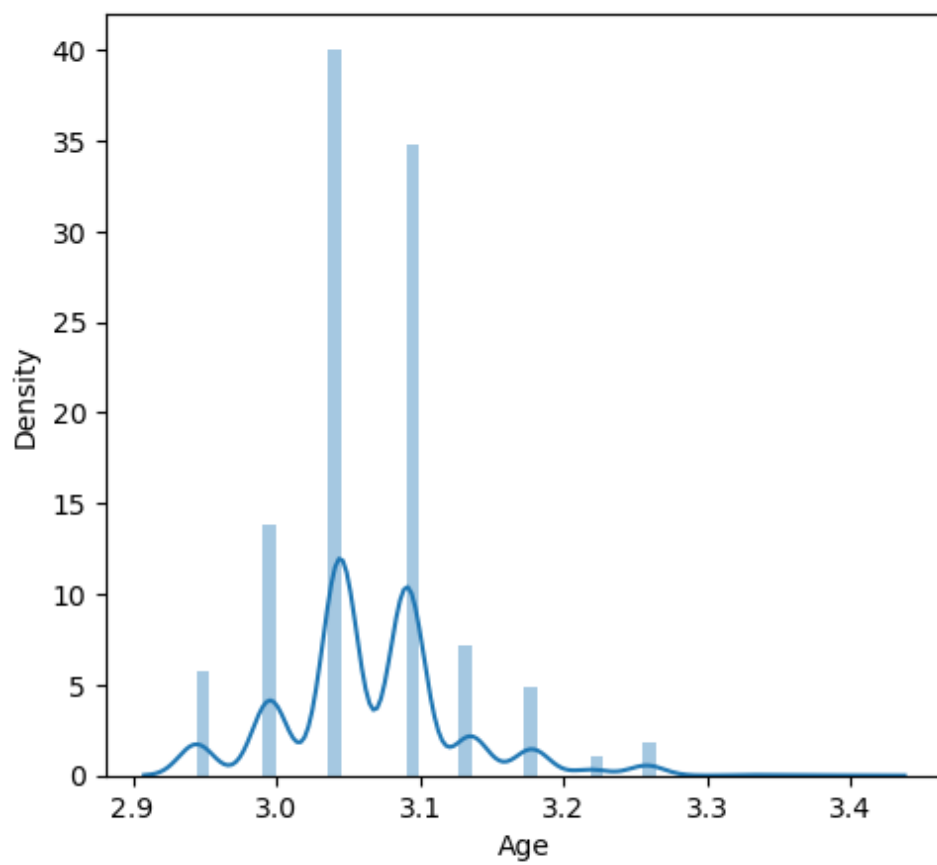   - o Build python code

Result:-

	Age	Gender	Stream	Internships	CGPA	Hostel	HistoryOfBacklogs	PlacedOrNot
0	22	Male	Electronics And Communication	1	8	1	1	1
1	21	Female	Computer Science	0	7	1	1	1
2	22	Female	Information Technology	1	6	0	0	1
3	21	Male	Information Technology	0	8	0	1	1
4	22	Male	Mechanical	0	8	1	0	1

```
Out[15]:  Age                 0
          Gender              0
          Stream              0
          Internships         0
          CGPA                0
          Hostel              0
          HistoryOfBacklogs   0
          PlacedOrNot         0
          dtype: int64
```

	Age	Gender	Stream	Internships	CGPA	HistoryOfBacklogs	PlacedOrNot
0	22	Male	Electronics And Communication	1	8	1	1
1	21	Female	Computer Science	0	7	1	1
2	22	Female	Information Technology	1	6	0	1
3	21	Male	Information Technology	0	8	1	1
4	22	Male	Mechanical	0	8	0	1
...	...	...	...	...	...	...	...
2961	23	Male	Information Technology	0	7	0	0
2962	23	Male	Mechanical	1	7	0	0
2963	22	Male	Information Technology	1	7	0	0
2964	22	Male	Computer Science	1	7	0	0
2965	23	Male	Civil	0	8	0	1

2966 rows × 7 columns

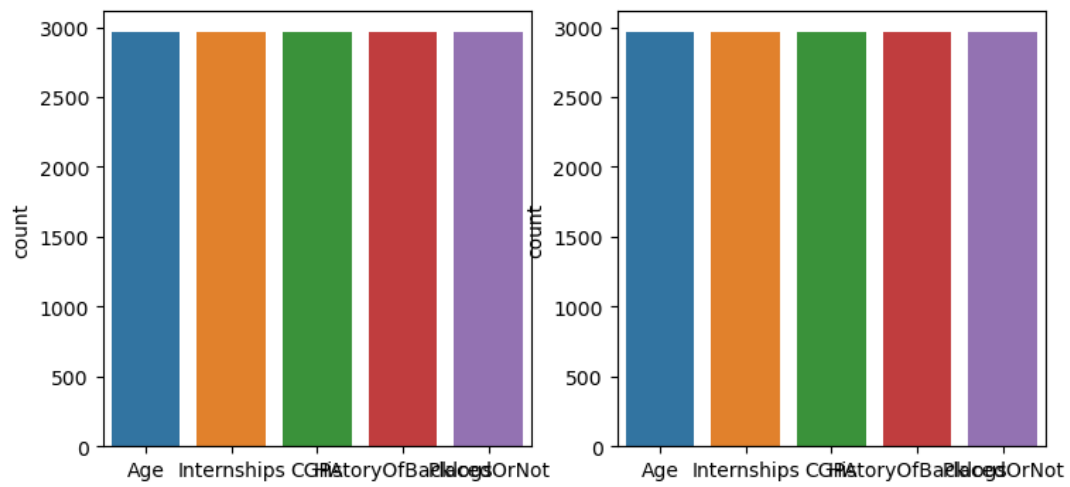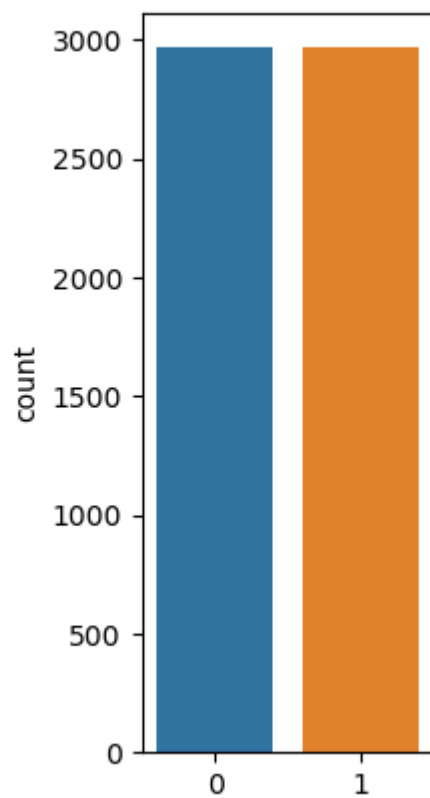Out[18]: <Axes: xlabel='CGPA', ylabel='Density'>

```
plt.show()
```
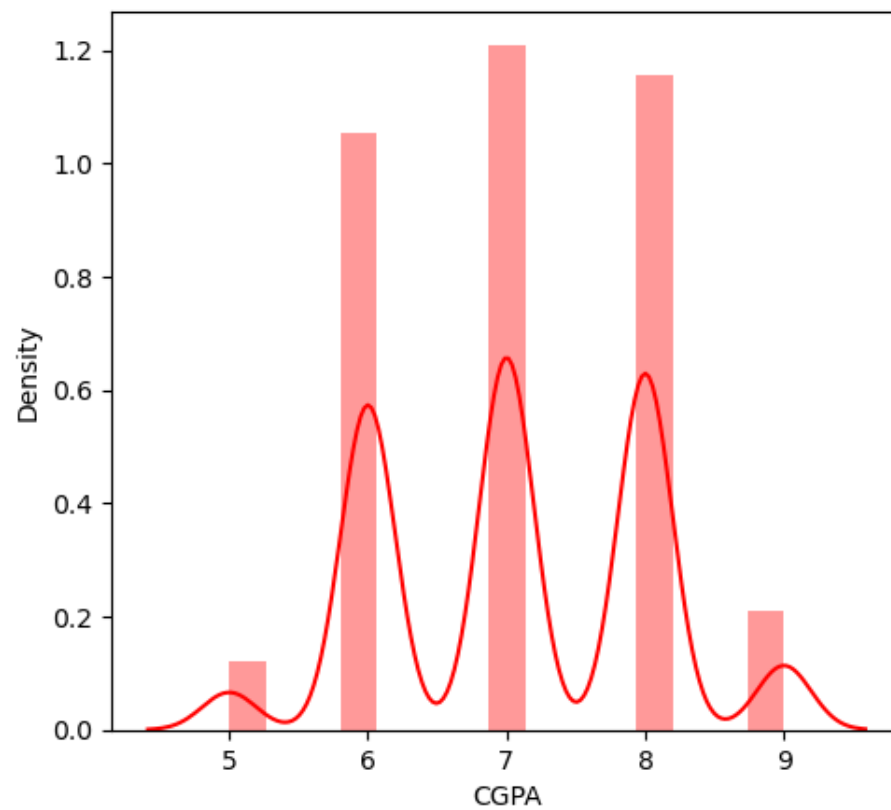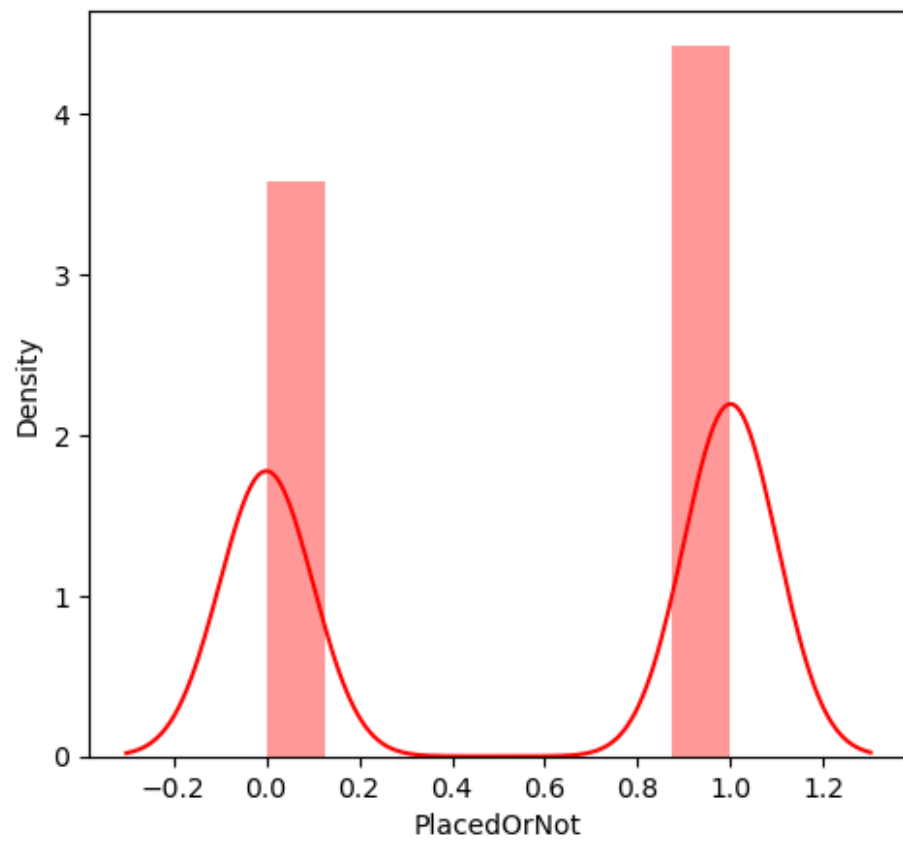
ut[31]:

```
         SVC
  SVC(kernel='linear')
```

Accuracy score of the training data : 1.0

---Results---
K: {'Regular': 9}
Score: {'Regular': 99.83164983164983}

Out[50]: (2372, 13)

```
ss: 0.1897 - accuracy: 0.9051
Epoch 96/100
119/119 [==============================] - 0s 1ms/step - lo
ss: 0.1859 - accuracy: 0.9064
Epoch 97/100
119/119 [==============================] - 0s 1ms/step - lo
ss: 0.1898 - accuracy: 0.9186
Epoch 98/100
119/119 [==============================] - 0s 1ms/step - lo
ss: 0.2040 - accuracy: 0.9136
Epoch 99/100
119/119 [==============================] - 0s 1ms/step - lo
ss: 0.1971 - accuracy: 0.9106
Epoch 100/100
119/119 [==============================] - 0s 1ms/step - lo
ss: 0.1935 - accuracy: 0.9123

Out[51]: <keras.callbacks.History at 0x226d51d5e70>
```

```
 * Serving Flask app '__main__'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a pro
duction deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
 * Restarting with watchdog (windowsapi)

An exception has occurred, use %tb to see the full traceback.
```

ADVANTAGES AND DISADVANTAGES:-

ADVANTAGES:-

- It solves categorization problems.

- It solves fake bio-metric detection problems.

- This is used to recognize the cloth pattern for visually damaged blind people.

- It assists within speaker diarization.

DISADVANTAGES:-

- This kind of recognition is difficult to execute & it is an extremely slow method.

- It requires a bigger dataset to acquire enhanced accuracy.

- It cannot clarify why an exact object is identified.

APPLICATION:-

- Statistical Techniques
- Syntactic Techniques
- Neural Network Approach
- Template Matching
- Fuzzy Model
- Hybrid Model

CONCLUSION:-

✓ **Find the point:** Determine which statement seems like the main prediction, value judgment, interpretation, or theory. What is the *one thing* the arguer is trying to convince us of?

✓ **Look for support indicator words:** Some words indicate that the statements they introduce are part of a support statement, and are not the conclusion. Support indicators like *because*, *since* and *for* can introduce statements that explain **why** the arguer believes a claim.

✓ **Double-check the claim:** If the statement you chose seems to retroactively, or continue on to, support *a different* claim, then you haven't chosen the main conclusion. In fact, it's now more

likely that the *different* claim being supported is the main conclusion.

✓ **Look for conclusion indicator words:** Some words are good indicators that the statements they introduce are part of a conclusion. The most common examples are *thus* and *therefore*, but *however*, *yet*, *although* and *but* can indicate conclusions, too.

✓ **Clarify pronouns:** If the main conclusion is ambiguous—for example, "but *this* is a mistake"—it's a good idea to rephrase the main conclusion using other parts of the passage. What is "this", and what does it mean that it's a "mistake"?

✓ **Match it!** Find the choice that accurately paraphrases the main conclusion that you identified.

FUTURESCOPE:-

- Partition the given data into two sets-
  Training and Test set
- Train the model using a suitable
  machine learning algorithm such as
  SVM (Support Vector Machines),
  decision trees, random forest, etc.
- Training is the process through which
  the model learns or recognizes the
  patterns in the given data for making
  suitable predictions.
- The **test set** contains already predicted
  values.
- It is used for validating the predictions
  made by the **training set**.

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BIBILOGRAPHY:-

Your bibliography should include every work that you cite in your text, as well as works that were important to your thinking, even if you did not mention them in your text. Label this standard type **Bibliography** or **Sources Consulted**.

There are other types of bibliography which you may be asked to create:

APPENDIX

A Source code of Flask:

```
From flask import Flask,render_template,request

App=Flask(_name_)

Import pickle
```

```python
Import joblib

model=pickle.load(open("placement123.pkl",'rb'))

ct=joblib.load('placement')


@app.route('/')

Def hello():
return render_template("index.html")


@app.route('/guest',methods =["POST"])

Def Guest():


    Sen1=request.from["sen1"]

    Sen2=request.from["sen2"]

    Sen3=request.from["sen3"]

    Sen4=request.from["sen4"]
```

```
    Sen5=request.from["sen5"]

    Sen6=request.from["sen6"]

@app.route('/y_predict', methods = ["POST"])

Def y_predicts():

x_test =[[(yo) for yo in request.from.values()]]

prediction =model.predict(x_test)

prediction = prediction[0]

return
render_template("secondage.html",y=prediction)
```