Rush Estimator

1 INTRODUCTION

1.1 Overview

This paper describes an live-cam based “Rush Estimator” in a cafeteria which uses ML for processing and prediction of the future data which helps in the business analysis of the cafeteria.

1.2 Purpose

It is important that we have to estimate the number of people that will visit the cafeteria at particular time, as the cafeteria has to be ready to manage the crowd.

We design a system through which we can estimate the number of people entering and leaving the cafeteria and can count the number of people present in cafeteria. By this data, the cafeteria people can prepare the food accordingly.

2 LITERATURE SURVEY

2.1 Existing problem

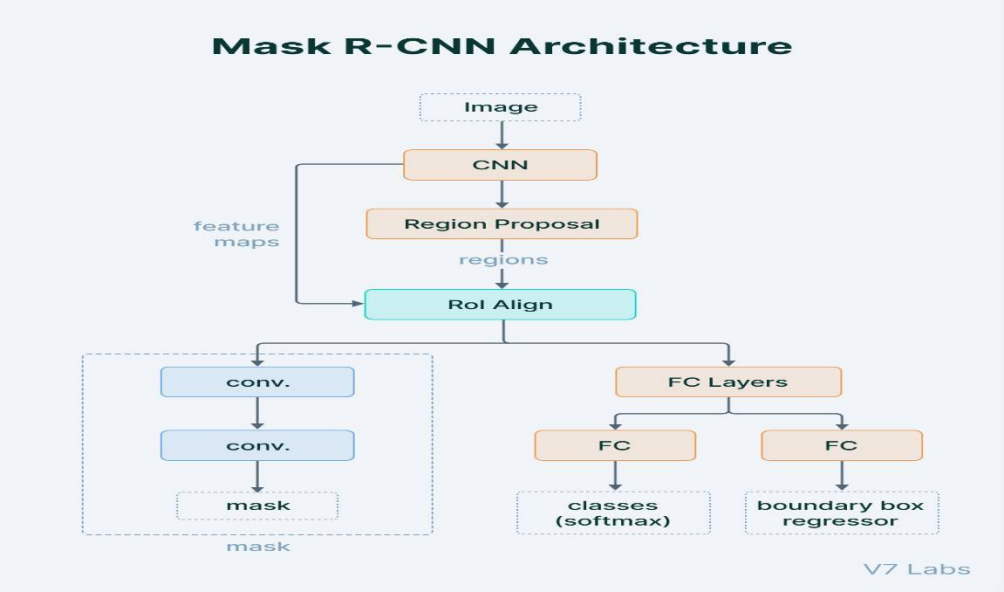
In the existing approach the analysis given just for upcoming days by their self without analyzing more a past data’s. while using with on past data no one given a diagrammatic representation about data and its output what are things need by public. More often the existing problem not clearly given solution to their problems.

2.2 Proposed solution

As a basis of measuring the process performance in existing problem, the measurement of data and its output accuracy is accurate with more dataset testing has shown that the proposed system produces relatively accurate indications of actual performance of construction projects. Using of diagrammatic representation reach the public easily and also attract easily.

3 THEORITICAL ANALYSIS

3.1Block diagram



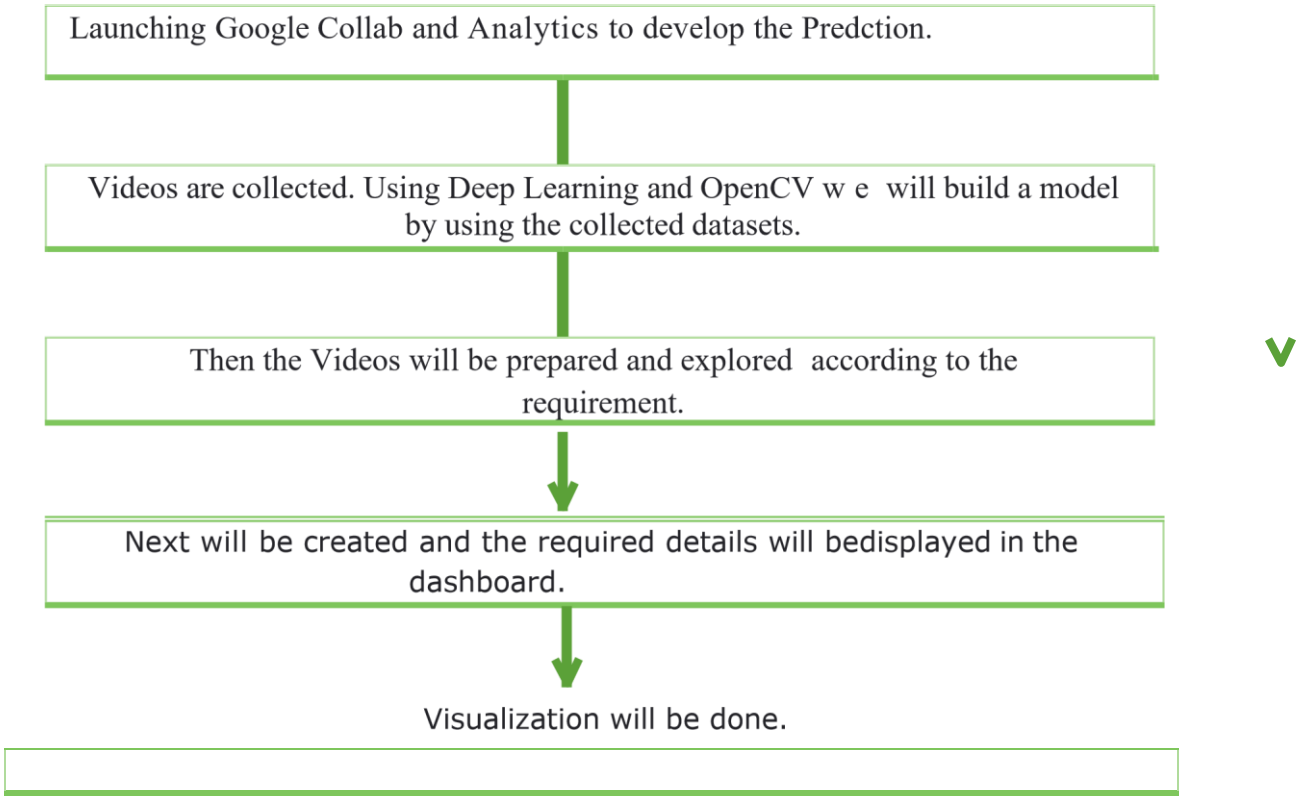
3.2Hardware / Software designing

- Deep Learning-CNN
- OpenCV
- Watson Studio
- Google Collab
- Flask
- Pandas

4 ·EXPERIMENTAL INVESTIGATIONS

- This method can be used by a Cafeteria for managing the crowd by counting the number of people coming to the cafe per day.
- Analyzing the number of people that will visit the café at a particular time will help the café to manage the crowd and avoid food shortage.

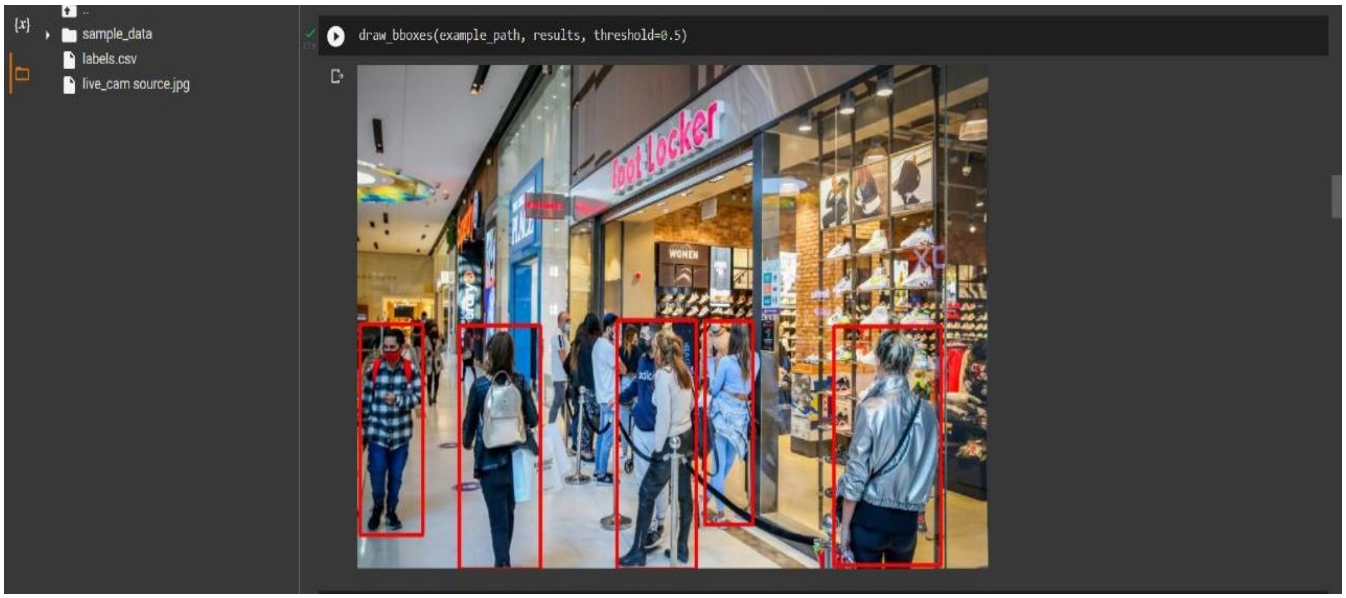
5FLOWCHART

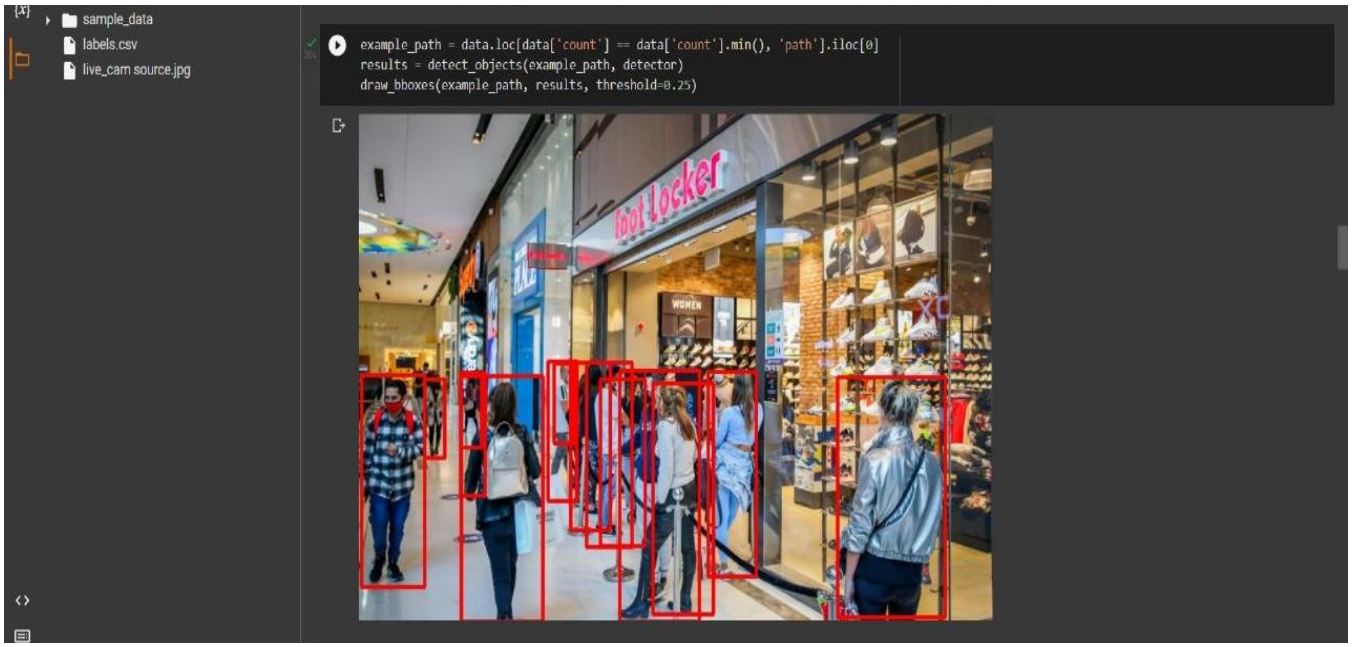


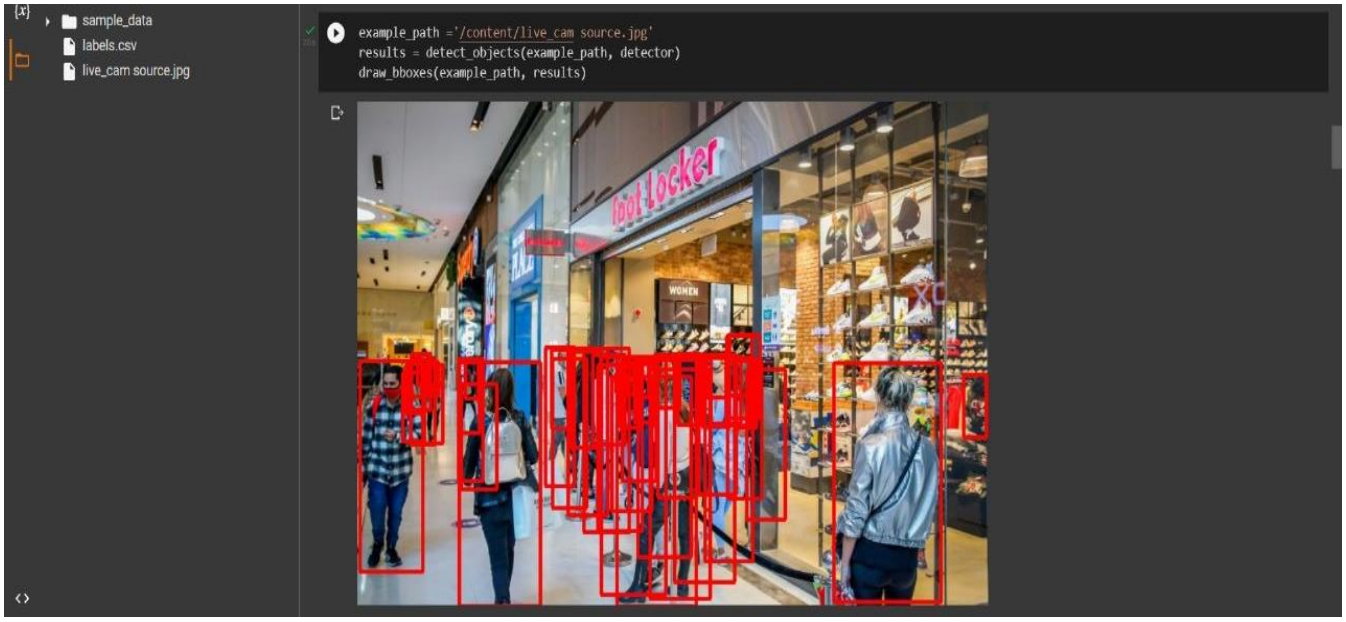
5 RESULT

The objective of this solution is to create a dashboard that visualizes the following capabilities and also forecasts the future results

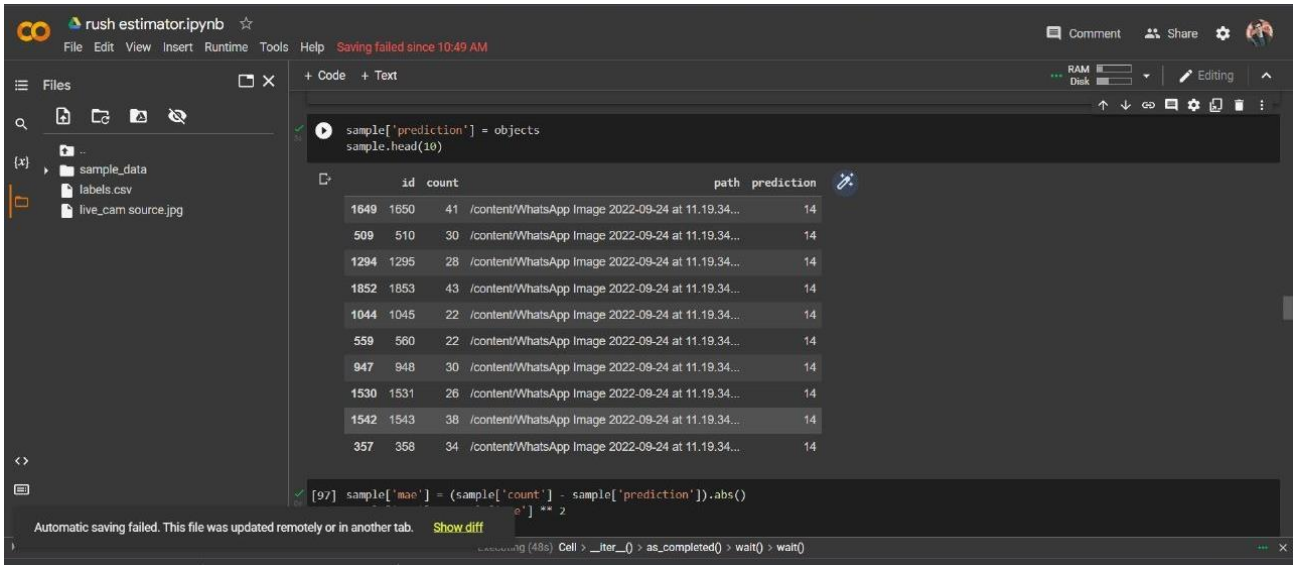
- Improve managing of the crowd in a café.
- Helps the café management to provide a ordered service.
- So, this is how we can build a model to estimate the rush in a café.


sample_data
labels.csv
live_cam source.jpg
draw_bboxes(example_path, results, threshold=0.5)
foot Locker
WOMEN

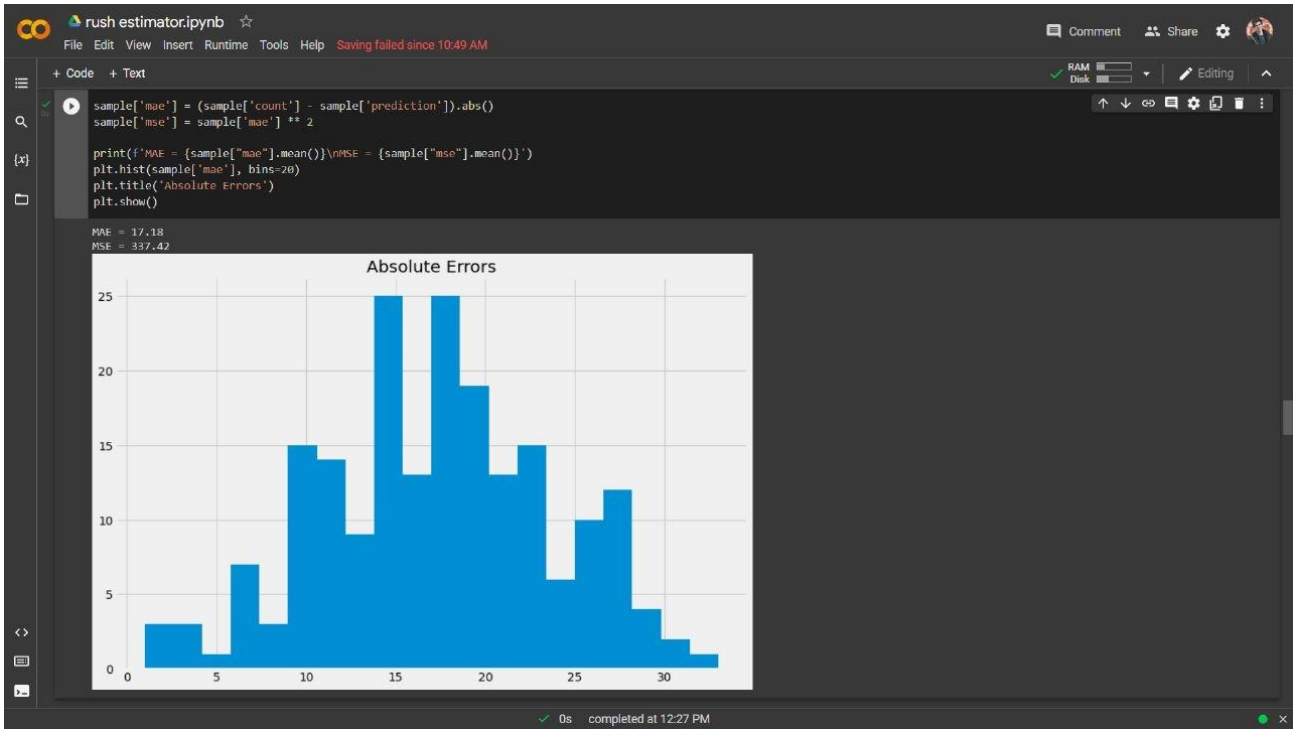

sample_data
labels.csv
live_cam source.jpg
example_path = data.loc[data['count'] == data['count'].min(), 'path'].iloc[0]
results = detect_objects(example_path, detector)
draw_bboxes(example_path, results, threshold=0.25)
foot Locker
WOMEN



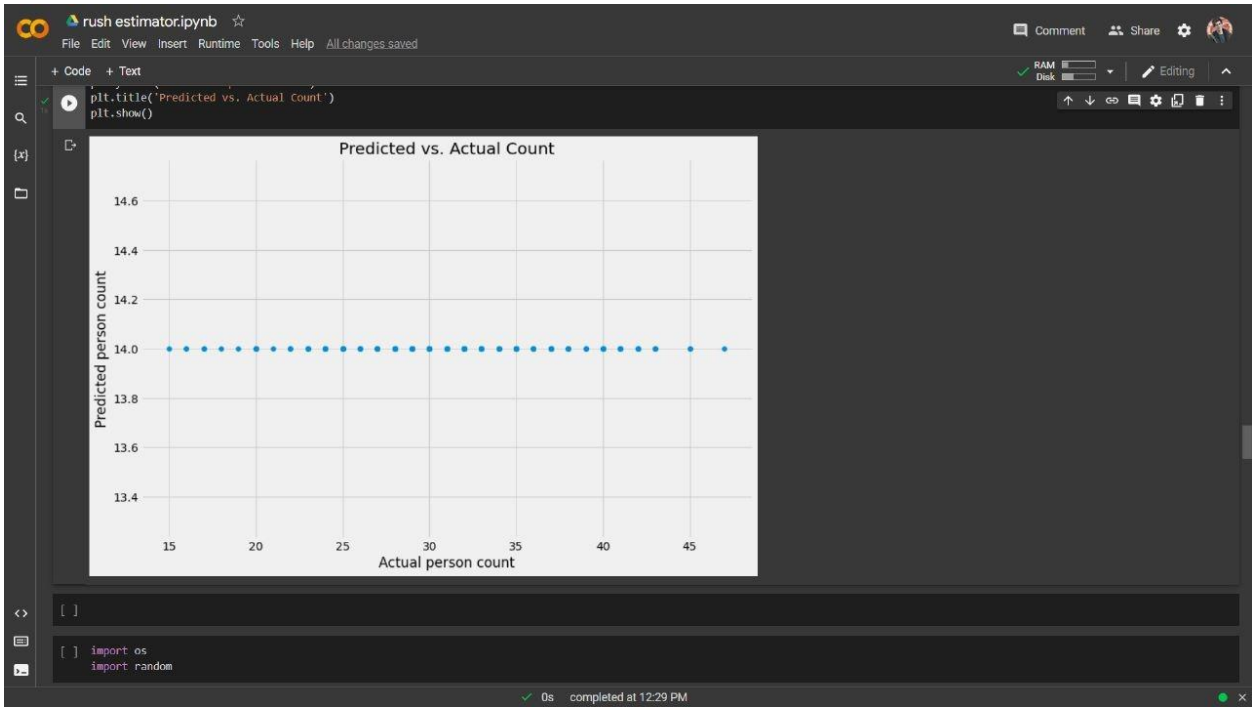
PREDICTION OUTPUT



PREDICTION WITH ABSOLUTE ERROR



PREDICTION VS ACTUAL COUNT



6 ADVANTAGES & DISADVANTAGES

ADVANTAGES:

- Diagrammatical representations make people to understand easily about our solutions easily.
- More reliable Data's.
- Easy to understand about data.
- Accurate information.
- User Friendly.

DISADVANTAGE

- There are no more modules in the proposed system.

7 APPLICATIONS

- Using of dataset representation people to understand and estimate the crowd of a café.
- Using of google collab makes creator easy to update about future updated solutions needed by people.

8 CONCLUSION

Thus, in this project a dashboard is created which predicts the people coming to the café visualizes some of the capabilities like finding the number of people visited the café that day, by which it predicts the crowd on the upcoming days at a particular time, etc... and also analyzes such vast amounts of data which will give the café management to maintain a ordered café without any wastage or shortage of the food. Which also helps the café to provide a good service without any delay.

9 FUTURE SCOPE

This model is used for predicting the number of people coming to a café by the previous data. This feature can also be used in many commercial spaces like Malls, Hyper-Markets, Cinema Halls, etc... By using datasets to cluster all the data given by the AI tool which helps in predicting the number of people visiting places. We can use this data to provide a neat service in any commercial places.