



North East University Bangladesh

Course title: Machine Learning Lab

Course Code: CSE-456

Project Report For:
Geometry shape detector

Team Name

“Silent Voice”

Supervisor:

Mr. Noushad Sojib

Department of CSE

North East University Bangladesh

Submitted by:

Md. Abu Hanif

ID no: 1701030200 67.

9th Semester

Md. Abu Shahan

ID no: 1701030200 17.

9th Semester

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Section: A

Department of Computer Science Engineering

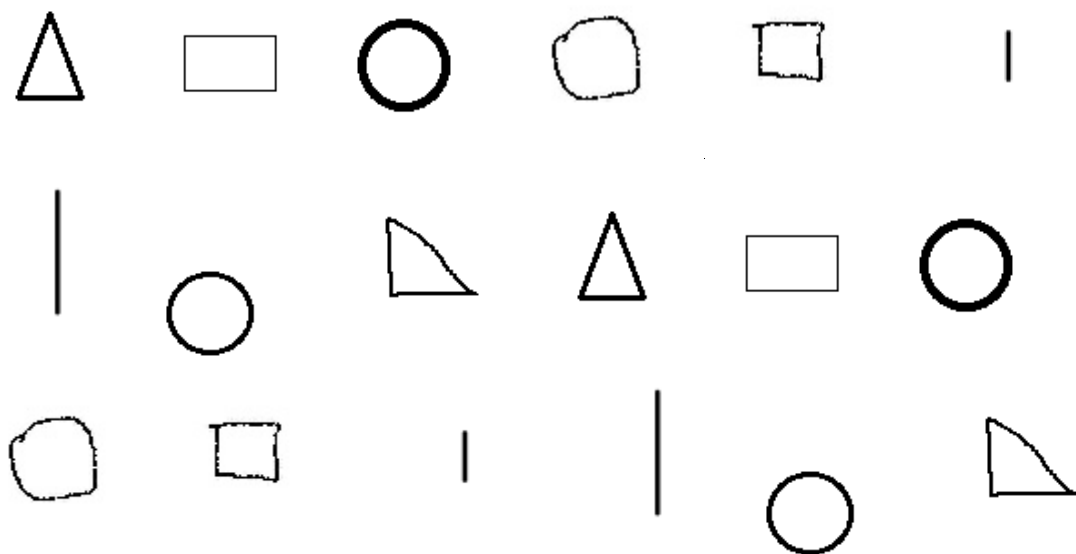
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Introduction:

Our project is simple; we are building a simple “Geometry shape detector” which is identifying shape such as circle, rectangle, triangle, straight line and so on. Actually this project working on supervised data.

First of all, we are import images which are some geometric shape on many type of drawn and every same shape classifies same class. Then convert Image to binary image then convert 1D matrix by using image processing mechanism.

Sample Data:



Challenges:

When I take a input of rectangle, algorithm predicts it as a circle because of rectangle and circle almost same.

Brief description of the steps:

1. First of all, we are import images which are some geometric shape on many type of drawn and every same shape classifies same class.
2. Then convert Image to Gray scale image.
3. Convert image to matrix using image processing mechanism.
4. Convert matrix to 1D array.
5. Training all data and testing data for calculating accuracy.
6. User input test image or draw in paint for test image
7. Then system run algorithms (KNN, Logistic Regression, perceptron. etc.) and predict result.

Screenshots:

User can paint input.

