LICENSE PLATE RECOGNITION

DIGITAL IMAGES PROSESSING

Aya Fouda 202002609
Nourhan Mohamed 211000628
Nada Radwan 211001128

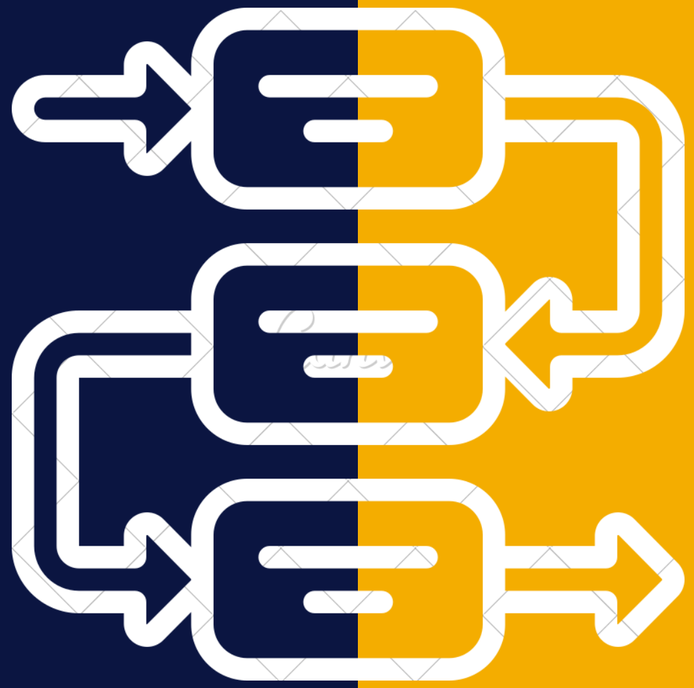
Introduction

Methodology

Results

Problem Definition

Car plates have recently been used for traffic control, border control, access- control, calculation of parking time and payment, search for stolen cars or unpaid fees, and the requirement for reliable identification at different lighting conditions, presence of random or structured noise in the plate, and nationality specific features, concerning plate’s size and type of characters order to detect car plates, and so we have worked on an image processing algorithm that detects car plate characters as a reliable tool for plate detection.



Methodology

Data Sets

From Keggle

Plates Dataset

Total 1080 images

864 testing images – 36 classes

216 validation image – 36 classes

Plates Dataset

433 car plate images to test on

Libraries

OpenCV

Matplotlib

PIL

Pytesseract

Sklearn

TensorFlow

Keras

steps

1 Read input image

2 Convert to greyscale

3 smoothing

4 Adaptive thresholding

5 Finding contour

6 Canny Filter

7 Data Preparation

8 Selecting Boxes

9 Imposing Boxes on Original Image

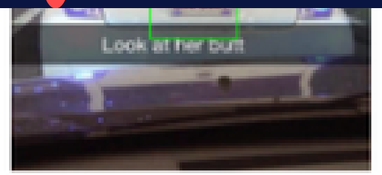
10 Rotate Plate Images

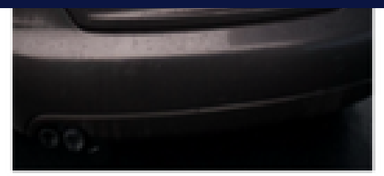
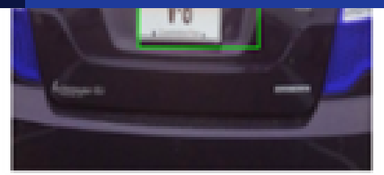
11 Thresholding Again to Find Chars
Taking Negative

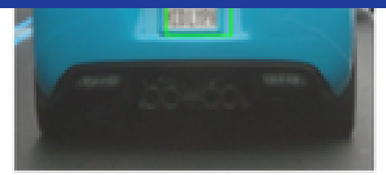
12 A function to seperate the characters then adding dilation and erosion

Results

Results

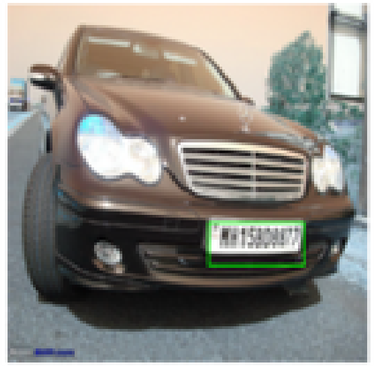
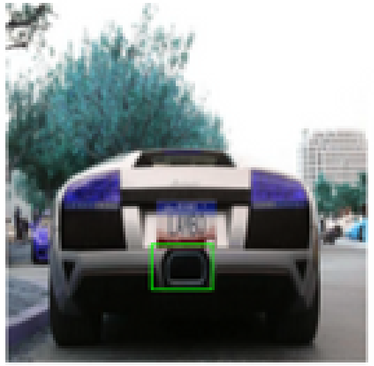


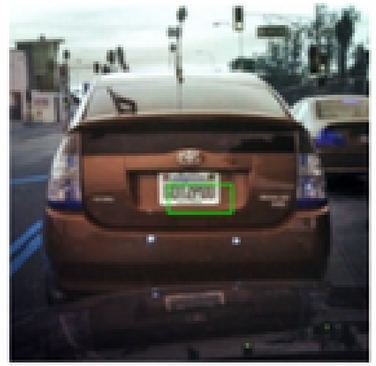









Thank You