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FINAL YEAR PROJECT REPORT

OBJECT DETECTION AND LOCALIZATION OF CUSTOM OBJECTS IN A VIDEO

By

ABDUL RAHIM (43690)

WASI HUSSAIN (43810)

SAMI GHAFFAR (32724)

SUPERVISED BY

(DR RAHEEL SIDDIQI)

BAHRIA UNIVERSITY (KARACHI CAMPUS)

2019

DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

Signature : _____

Name : Abdul Rahim

Reg No. : 43690

Signature : _____

Name : Wasi Hussain

Reg No. : 43810

Signature : _____

Name : Sami Ghaffar

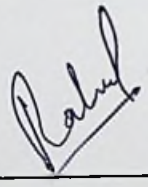
Reg No. : 32724

Date : 10-2-2020

APPROVAL FOR SUBMISSION

We certify that this project report entitled **"OBJECT DETECTION AND LOCALIZATION OF CUSTOM OBJECTS IN VIDEOS"** was prepared by **ABDUL RAHIM WASI HUSSAIN SAMI GHAFFAR** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Computer Science (Honours)at Bahria University.

Approved by,

Signature : 

Supervisor: Dr RAHEEL SIDDIQI

Date : 10-2-2020

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OBJECT DETECTION AND LOCALIZATION OF CUSTOM OBJECT IN VIDEOS

ABSTRACT

The main objective of this project is to localize and detect the any moving object in a real time video and obviously that can be one of the challenging task in the fields like the computer vision due to several factors such as the centroid or the origin of the object, the location of the object different types of shadings in a video to detect etc.

By studying the Many of the Artificial Intelligence algorithm one of the most efficient that we have found is the Convolutional Neural Network or the CNN that has the good accuracy rate and yet the most perfect one to fit for recognizing any custom trained object in a video, A Module will be developed which will further train and detect the custom objects and all the final implementation will be done using the Programming language called 'Python' IDE (PYcharm).

Just to train a single object there the minimum requirement for a single object is more than the 900 images and if increase the system will get more efficient in detecting that image and by considering that I have noticed that Convolutional Neural Network is the better choice than all other deep learning algorithms there would be one of the training phase and the testing phase as well. Further development is also included in the report.

Object Detection is the process of finding real-world object instances like many real life time objects still images or Videos. It allows for the recongnition , localization, and detection of multiple objects within an image which provide us with a much understanding of an image as a whole. It is commonly used in applications such as image retrieval, security, surveillance, and advanced driver assistance system (ADAS).

We work on different data set and train them to detect an objects , it give us 100% accuracy result through CNN algorithm.

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