FINAL YEAR PROJECT REPORT

IMAGE BLUR ESTIMATION AND REMOVAL USING DEEP LEARNING

In fulfillment of the requirement
For degree of
BS (Computer Science)

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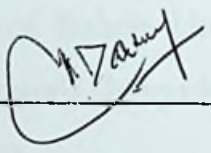
DECLARATION

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 : 

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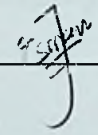
Signature : 

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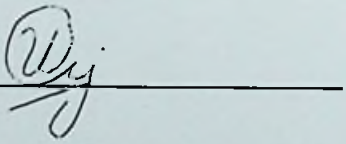
Signature : 

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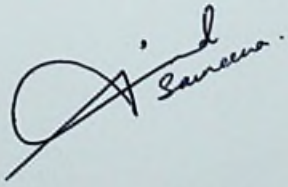

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ABSTRACT

The objective of this project is to develop a system that estimates the type of image blur and removes it using deep learning. This report explores different techniques used for image blur estimation and removal. Different stages involving image processing that include pre-processing stage, segmentation, and feature extraction will be discussed in this report. The end product of this project will be coded in Python.

This project uses Convolutional Neural Network (CNN) and Artificial Neural Network (ANN) to develop the software. The advantage of CNN is that it allows prominent features extraction from a data that is 2D and 3D. Then the ANN is used to estimate the type of blur so that it could be removed. After the initial stages of pre-processing, training and testing is done and 90% of data is used for training and remaining 10% for testing. There are three layers used in CNN among which two are hidden layers. The total of 192 neurons are used in this system.

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