FINAL YEAR PROJECT REPORT

DESIGN AND IMPLEMENTATION OF DEEP LEARNING METHOD FOR IMAGE MINING FOR FACE DATABASE

In fulfillment of the requirement
For degree of
BS (Information Technology)

By

MUHAMMAD USMAN **45909 BSIT**
AIMEN MIRZA **45894 BSIT**

SUPERVISED

BY

DR. HUMERA FAROOQ

BAHRIA UNIVERSITY (KARACHI CAMPUS)
2016-2020

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.

Name : Muhammad Usman

Reg No. : 45909

Signature : _____

Name : Aimen Mirza

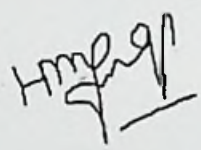
Reg No. : 45892

Date : _____

APPROVAL FOR SUBMISSION

We certify that this project report entitled **"DESIGN AND IMPLEMENTATION OF DEEP LEARNING METHOD FOR IMAGE MINING FOR FACE DATABASE"** was prepared by **MUHAMMAD USMAN** and **AIMEN MIRZA** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Information Technology at Bahria University.

Approved by,



Signature : _____

Supervisor : Dr. Humera Farooq

Date : 15 June, 2020

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ABSTRACT

We present a project that proposes an algorithm which is able to segregate random pictures into organized groups. We use the technique of unsupervised learning i.e. clustering for doing so. Our effort makes it possible to cluster all images with respect to the categories we create. Here we will focus on one of the categories i.e. poses.

We are using five datasets named Georgia Tech face database, Yale Face database, CAS-PEAL, MIT-CBCL and Kohn Kanade. However, in this particular piece of work, we will use Georgia Tech face database. We are focussing on mining the unlabelled images having various poses into separate groups. For this we are applying the unsupervised learning technique of machine learning. We are making clusters that will gather similar poses of the subjects. Hierarchical Clustering method is being used for this purpose. The images are inserted into the algorithm; they are then pre-processed so that they all align over a specific set of resolution and image type. After pre-processing the algorithm form clusters and sends images to their respective clusters.

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