A

Dissertation

On

CONTENT BASED IMAGE RETRIEVAL
USING MULTIPLE FEATURES

Submitted in Partial fulfillment of the requirement

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MASTER OF TECHNOLOGY

In

(Signal Processing and Digital Design)

Submitted by

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CERTIFICATE

It is certified that the dissertation entitled **"CONTENT BASED IMAGE RETRIEVAL USING MULTIPLE FEATURES"** is a work of **SURJEET SINGH** Roll No. **2K11/SPD/17**, a student of Delhi Technological University. This work was completed under my direct supervision and guidance and forms a part of the Master of technology (Signal Processing and Digital Design) course and curriculum. He has completed his work with utmost sincerity and diligence.

The work embodied in this major project has not been submitted for the award of any other degree to the best of my knowledge.

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ABSTRACT

Content based image retrieval is one of the most important tasks in computer vision. Images have two important visual features, Color and texture which play an important role in content based image retrieval system. In this report, an efficient content-based image retrieval system is proposed based on color and texture feature. We are extracting the color feature by quantifying the Intensity images or gray scale image. It represents an image as a 2D component carrying values between 0 and 255 matrix where every element has a value corresponding to how bright/dark the pixel at the corresponding position should be colored. Texture feature is obtained by using local binary pattern. LBP is defined as a gray scale invariant texture measure and is a useful tool to model texture images. The original LBP operator labels the pixels of an image by thresholding the 3x3 neighbourhood of each pixel with the value of the central pixel and concatenating the results binomially to form a number.

Image features are extracted and compared using Euclidian distance measure based K nearest neighbour classification algorithm. The results shows that LBP consistently performs much better than the remaining other models. For testing the proposed approach, the WANG database. This database is a subset of Corel stock photo database. It consists of 10 different categories having 100 images each.