DEBLURRING OF NUMBER PLATE IMAGES

A PROJECT REPORT PRESENTED BY

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**CHAPTER 1**

**INTRODUCTION**

Human vision information is the most trusted source of information compared to other data acquisition done by the human body. An image is a generic container of any visual information. The procedure of retrieval and analysis of the visual information by a digital device is called digital image processing. The development of visual information for human logic and processing of visual data for independent machine perception are the main important areas that had triggered the interest in image processing subject long ago [1].

In fact, when a physical process generates an image, the energy radiated by the source is proportional to its intensity. Hence, the final image, i(x,y), is not zero and finite [2]. Hence, an image is expounded as a two dimensional light intensity function, i(x; y), and the numeric value of i, at any given point (x; y) will be corresponding to the brightness of the image at that given point [2]. A digital image can be expressed as a matrix. Its row and column indices will indicate point in the image. The analogous matrix element can be known as picture element. Its pixel value represents the intensity at that point in the matrix. The input for digital image processing is always an image and the output of it would be an image and some relevant information gathered on function application on the given image.

Followings are the methods used as techniques of digital image processing [1]:

A. Image Representation / Modelling

B. Image Enhancement

C. Image Restoration

D. Image Analysis

E. Image Reconstruction

F. Image Data Compression

With the use of these techneques images can be processed variously to get various outputs such as processing of blurred images to get better details images.

**CHAPTER 2**

**BACKGROUND**

With the need of various fields at present, image deblurring is an important subject which is used in a vast scale. For example it is very important to get the details of a vehicle or a person which is captures with a blur on a CCTV camera.