Chapter 4

INSTRUCTIONS FOR IMAGE PROCESSING APPLICATIONS

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Introduction

In today's world technology is manifested in every field. The advancement of technology in a particular area is of course unthinkable. Technological advances in image processing and evaluation are advancing rapidly. The quality of the product in the light of the data obtained from the visual evaluation; color or pattern difference, the size or quantity of the product can be revealed visually according to the area covered. These approaches have been carried out by employees for centuries. It is impossible to obtain objective results in human selection, quality control or evaluations or to wait for the same evaluation for the same standards for a long time. The tendency to make mistakes is indirectly dependent on daily life or working environment. However, in the light of technological developments, the spread of measurement instruments, the emergence of assessment tools or software brings more reliable, precise measurements and evaluations. Now surface inspections, product part inspections, visual quality control inspections are performed with image processing techniques. The results are more reliable, recordable and can be evaluated objectively. Today, in many sectors that require visual quality control, quality control is tried to be performed with image processing methods and techniques.

Image Processing is a set of computational techniques used to analyze, enhance, compress, and reconstruct images. This is usually a technique that takes data from a digitized image to perform some of the interpretation and recognition tasks performed by humans or to develop an improved image that is more useful or pleasing to the observer⁽¹⁾.

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Today, in many languages, image processing examples, publications, articles and scientific studies have been made easier to reach and the number of them is increasing day by day. As a result of such knowledge, enterprises can strengthen their own infrastructure and develop their R & D units in this direction. The number of people who want to use image processing in their work is increasing day by day.

The process of image processing is to determine the appropriate camera, light selection and pc hardware and to determine the appropriate image processing techniques and methods to write the appropriate program. At this point, the image processing library, which already contains the necessary methods, can also be used. If studies have already been done in this direction, the use of the library will speed things up considerably.

Keywords: Image Processing, Software, Lighting efficiency

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