RESEARCH REPORT

DEVELOPMENT OF SOFTWARE FOR PC-BASED MACHINE VISION

This report submitted to the Bureau of Research & Consultancy for the requirement of completing the research program.

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DECLARATION

No portion of the work referred to in the report has been submitted in support of an application for another grant of this or any agencies.

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ABSTRACT

The aim of this project is to develop a computer program for an automated inspection process. Three main inspection techniques have been developed ;

1. Pixel-by-pixel subtraction technique
2. Histogram Technique
3. Circular Background Technique.

All these techniques are general purposed techniques that can inspect manufactured products on a production line. The concept and logic behind each technique are also explained.

The critical factors governing the success of this system in a production-line are also highlighted. The performance and accuracy of the program have been evaluated. Finally, several recommendations have been suggested for future development of the program.

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