

**TEXT LOCALIZATION AND RECOGNITION OF IDENTIFICATION CARD**

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### STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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## ABSTRACT

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Identification card has been the main reference for officials to identify a person. To be able to make a computer read the card optically, we can automatically reduce effort to read it manually. Therefore one way to achieve this is to utilize image processing techniques and classification techniques to make a computer to read identification card automatically.

Several techniques such as Hough Transform, used to accomplish the goal to read identification card automatically. These techniques has proven their versatility in many other research and widely implemented and gives good result. Hough Transform used to detect all possible lines in an image, this can help us to detect card in the image by analyzing all the lines detected. Hough Transform takes an input of an edge image, therefore we use Canny edge detector. Canny edge detector is an enhancement of Sobel operator with the image being smoothed first using Gaussian smoothing.

Since each characters extracted first individually, each characters then recognized using Nearest Neighbor algorithm and the result is compared to Naïve Bayes algorithm.

The result give good result on detecting the cards as all cards tested successfully being extracted from the image acquired. Although not all the characters are detected some characters extracted recognized incorrectly, therefore this should be able to be edited by human to correct the mistakes.

By using these techniques, it is expected to achieve this goal to be able to help working on identification card's information to ease and make administrative processes faster.

*Keywords:(text localization, image processing, Canny edge detector, Hough Transform, Gaussian, Naïve Bayes, identification card, Connected Component Extraction, line detection, rectangle detection, optical character recognition, printed document, Nearest Neighbor, document text recognition, image histogram, text line detection, object orientation, text recognition)*





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## DEDICATION

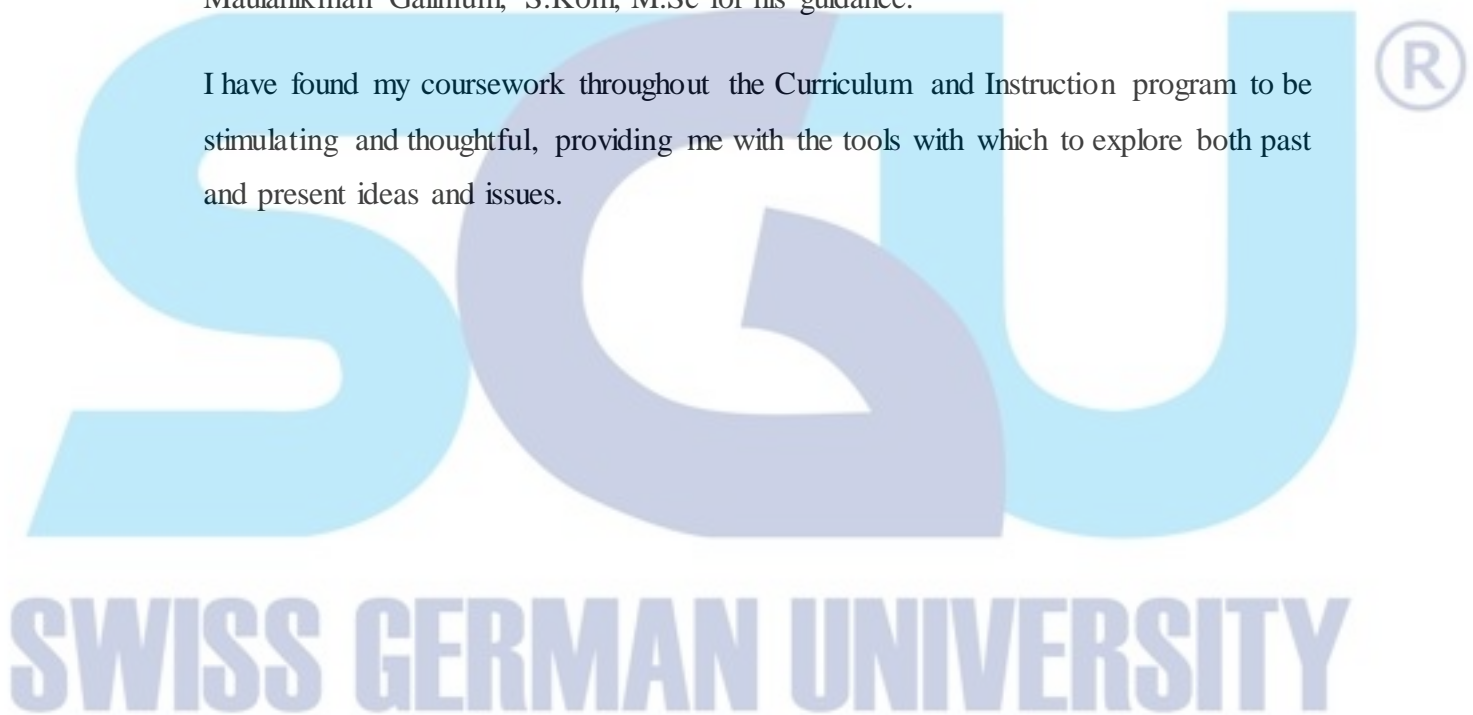
I dedicate this works for the future of the country I loved: Indonesia



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I have found my coursework throughout the Curriculum and Instruction program to be stimulating and thoughtful, providing me with the tools with which to explore both past and present ideas and issues.



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