



**PROJECT REPORT**  
**LEAF CLASSIFICATION USING SVM AND CANNY**  
**EDGE DETECTION**

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6. I have acknowledged all main sources of help.
7. Where the work is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself.

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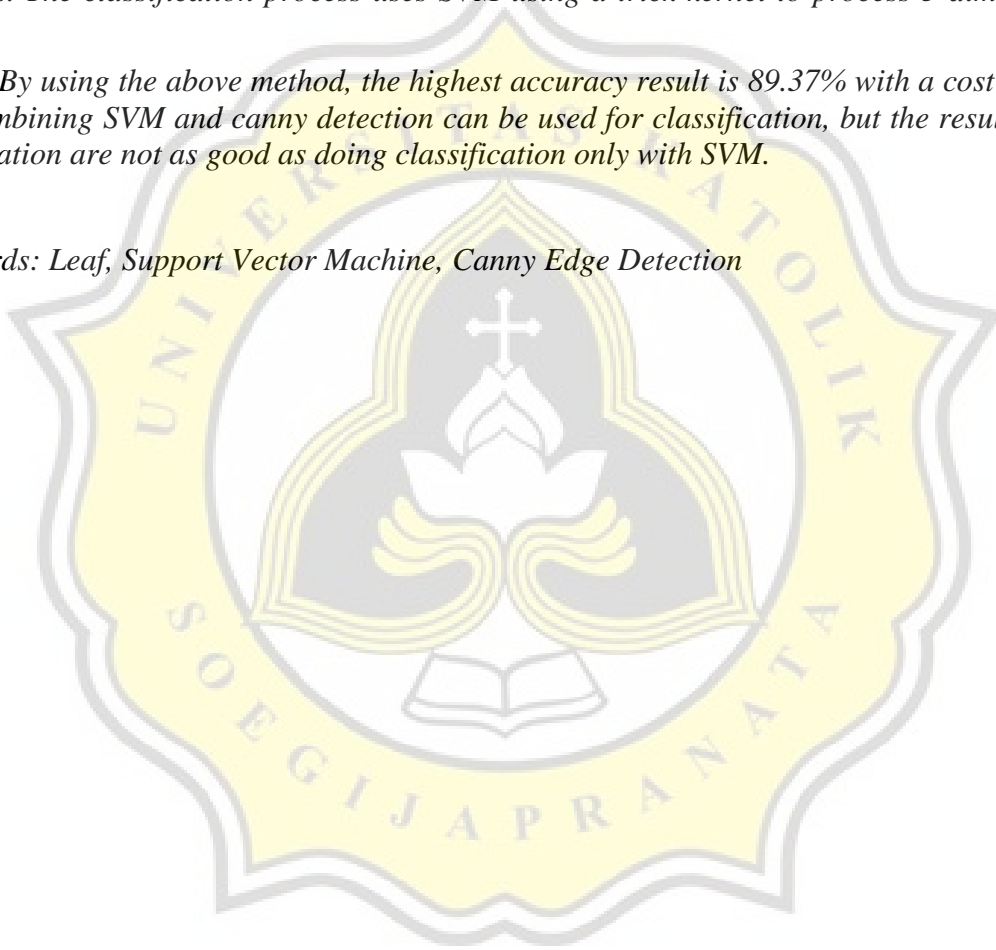
## ABSTRACT

*Plants have evolved over the years and many changes happened to the structure and uses of the plants themselves, especially the leaves. Their leaves can be used for cooking, beverages, health, and herbal medicines. However, many leaf shapes are similar to each other, making it difficult to recognize the leaves and difficult to determine how to process them. For this reason, it is necessary to conduct research on leaf classification using edge patterns to identify plant species.*

*From the above problems, it is recommended to create a program that classifies plants based on leaves. Canny edge detection is used for image processing and extracting leaf edge patterns. The classification process uses SVM using a trick kernel to process 3-dimensional data.*

*By using the above method, the highest accuracy result is 89.37% with a cost value of 50. Combining SVM and canny detection can be used for classification, but the results of the combination are not as good as doing classification only with SVM.*

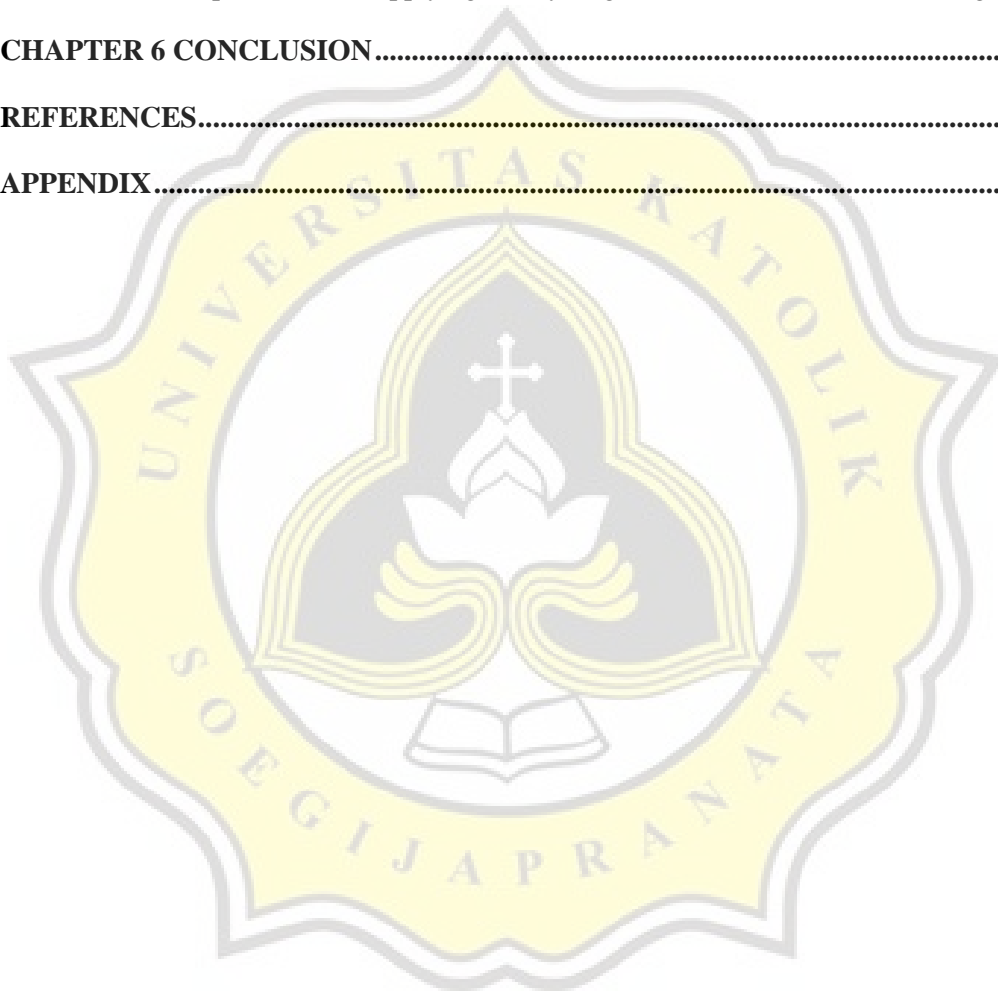
*Keywords: Leaf, Support Vector Machine, Canny Edge Detection*



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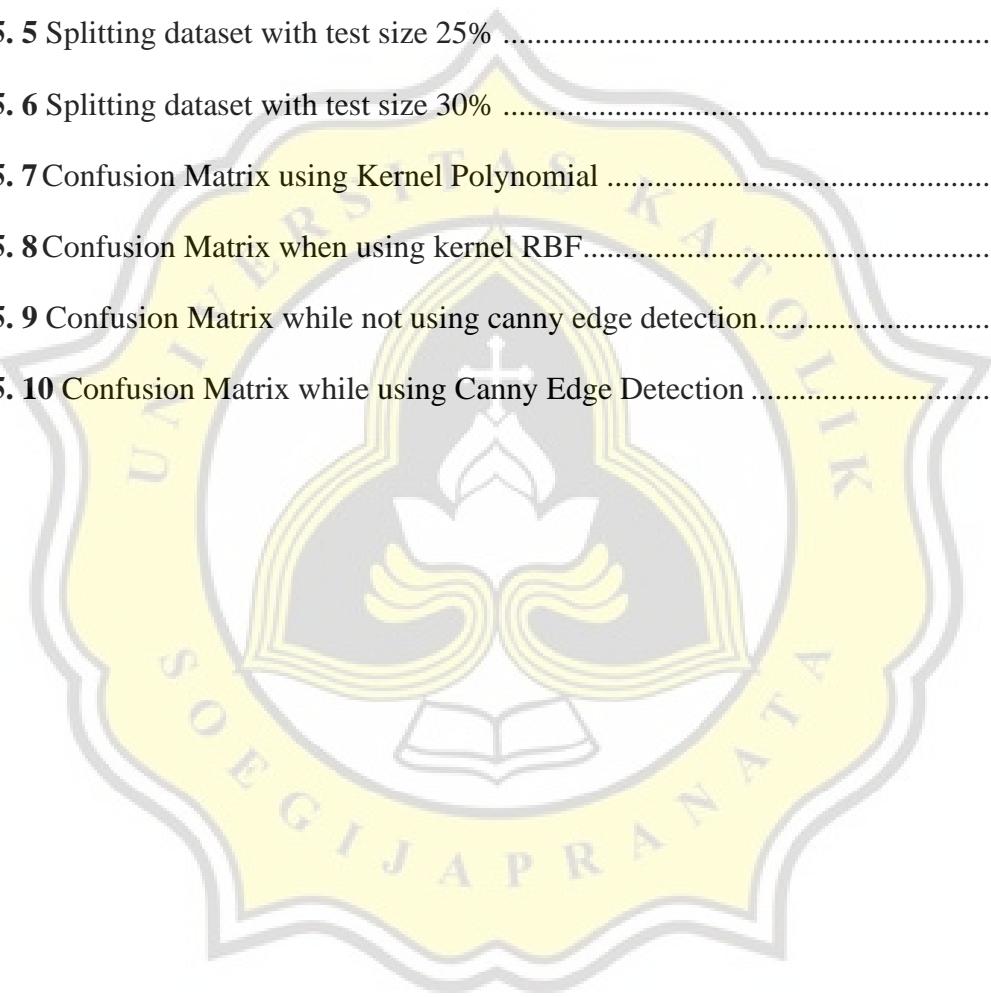
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