

## **PROJECT REPORT**

COMPARING OPTIMIZER ADAM, RMSPROP, AND SGD IN THE CLASSIFICATION OF BANANA RIPENESS USING CNN ALGORITHM

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### **APPROVAL AND RATIFICATION PAGE (HEADING PLAIN)**



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The author is fully aware that in the preparation of this thesis there are still many shortcomings, although the author has tried as much as possible. Therefore, constructive criticism and suggestions, the author hopes to improve preparation and writing of this thesis. The author hopes that this thesis can useful and can expand and add knowledge for all of us.

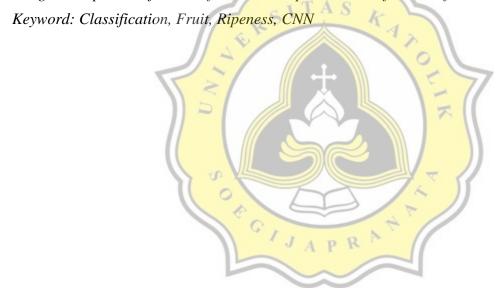
#### **ABSTRACT**

## Comparing Optimizer Adam, RMSprop, And SGD In The Classification Of Banana Ripeness Using CNN Algorithm

Banana is one of the most popular fruit in indonesia because this fruit is very easy to find in every area and the price offered is also relatively very affordable. But for some people don't know the level of ripeness of banana. In this project will classification the level ripeness of banana.

Ripeness banana have different colors, so we need a method that can classification the level of maturity. Therefore, we use Convolutional Neural Network method which can be called CNN, and will compare 3 optimizer, namely Adam, RMSprop, and SGD, and compare 3 result with different optimizer to find out which optimizer is better for this project.

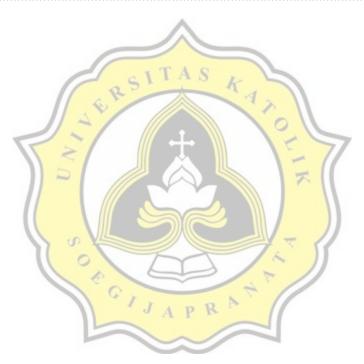
The final result for this project is that CNN can run well for classification of banana ripeness and the predicting is also quite good, this project get a final accuracy result 93,75% using SGD optimizer for classification the ripeness level of banana fruit.



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