



**PROJECT REPORT**  
**ROTTEN ORANGE OBJECT DETECTION ANALYSIS**

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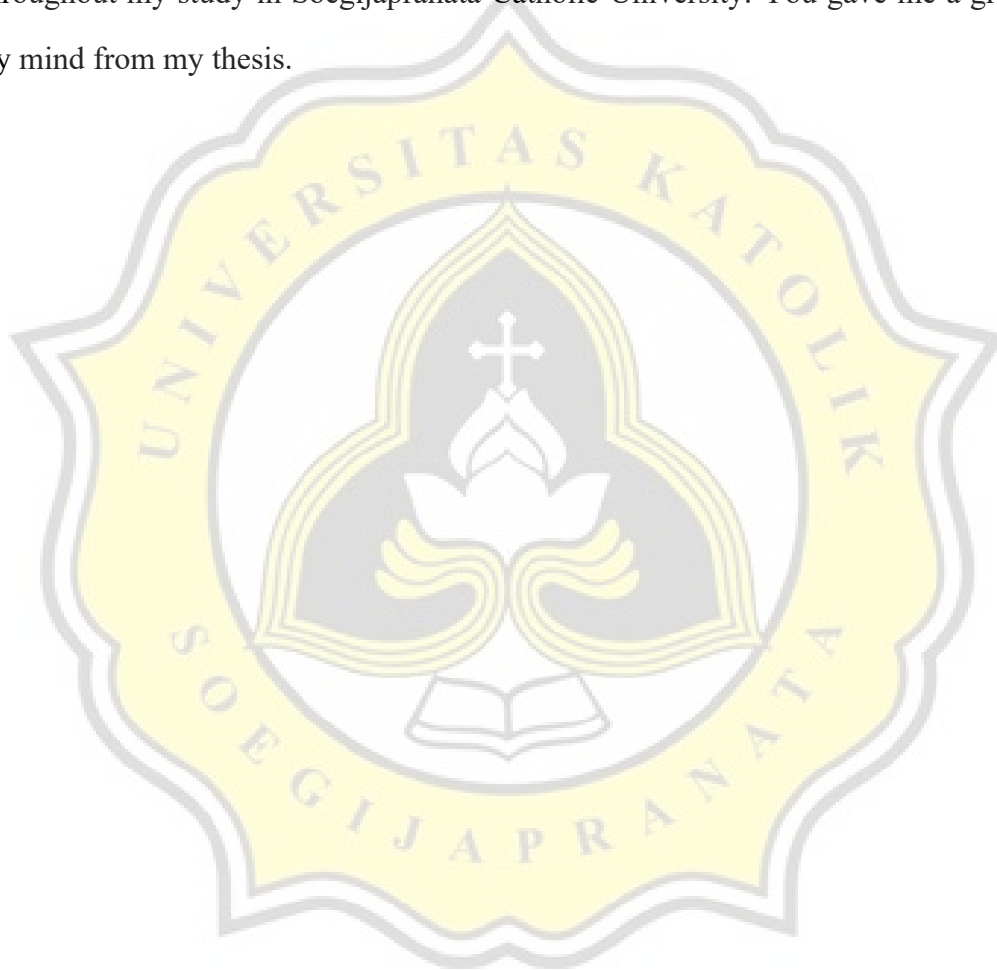


Adhitya Putra Minardi

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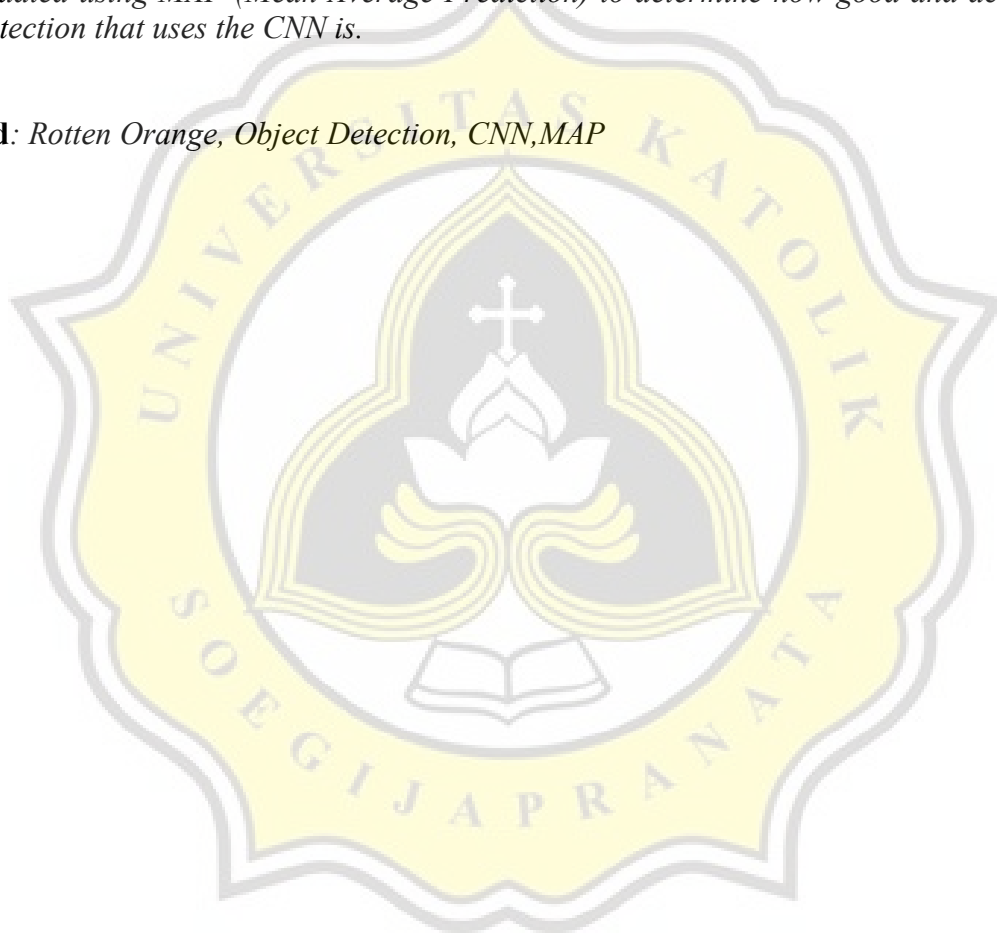
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## **ABSTRACT (ABSTRACT TITLE)**

*Rotten fruits are a reality in the fruit and vegetable industry. Rotten fruits need to be removed immediately or it will infect the other fruits. If the fruit is big like for example watermelon or melon it's easy to detect and remove. But if the fruit is small and comes in large groups like oranges it can be a problem to find and remove. To do this I propose the use of CNN algorithm to make object detection, because CNN can be used to classify images and can be trained with images. It will help determine and find the rotten oranges. Doing this will help the fruit seller to remove the rotten oranges so it can't infect other oranges and cause a loss. The results of the object detection will be an image orange that has been predicted by the object detection to find the orange and determine whether it's rotten or fresh. Then the object detection gets evaluated using MAP (Mean Average Prediction) to determine how good and accurate the object detection that uses the CNN is.*

**Keyword:** *Rotten Orange, Object Detection, CNN, MAP*



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