



**Implementation of Deep Learning Algorithm in Waste  
Classification using YOLOv5s Real-Time Object Detection**



**THESIS REPORT**

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**INFORMATICS ENGINEERING STUDY PROGRAM**

**FACULTY OF COMPUTER SCIENCE**

**MERCU BUANA UNIVERSITY JAKARTA**

**2023**



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**Submitted as One of the Requirements for Obtaining a Bachelor of Computer  
Degree**

**INFORMATICS ENGINEERING STUDY PROGRAM  
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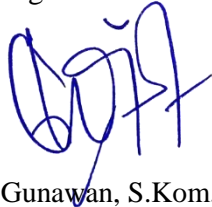
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## FOREWORD

We give thanks to God Almighty. With His grace and mercy, the writer can finish his thesis with the title "Implementation of Deep Learning Algorithm in Waste Classification using YOLOv5s Real-Time Object Detection".

This thesis was prepared and submitted to fulfill the requirements for obtaining a Bachelor of Computer (S.Kom.) degree at the Faculty of Computer Science at Mercubuana University, Jakarta. Besides that, writing this thesis also aims to provide knowledge to the reader.

The author realizes that without the help and guidance of Ir. Emil R. Kaburuan, Ph.D., IPM. Therefore, the author would like to thank:

1. Both parents who have given encouragement to motivate the writer in completing the thesis.
2. Mr. Emil Robert Kaburuan who also gave attention and time to guide the writer to complete the thesis.
3. As well as various parties that the author cannot mention one by one.

Finally, the author realizes that this thesis is still far from being perfect due to limited knowledge and experience. Therefore, suggestions and constructive criticism will be received with pleasure. The author hopes that this thesis can be useful for all parties who need it.

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