

MINI ROBOTIC ARM  
BASED ARDUINO AND VISUAL BASIC 6.0  
FOR ARDUINO MICROCONTROL LEARNING IN ATMI CIKARANG

By  
MATHIUS WAGYANTORO RESI BAGUS PANUNTUN  
1-1501-113



SWISS GERMAN UNIVERSITY  
EduTown BSD City  
Tangerang 15339  
Indonesia

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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.

Mathius Wagyantoro Resi Bagus Panuntun, A.md

Student

Date

Approved by:

Edi Sofyan, B.Eng., M.Eng., Ph.D

Thesis Advisor

Date

Ir. Surjo Abadi, M.Sc

Thesis Co-Advisor

Date

Dr. Ir. Gembong Baskoro, M.Sc

Dean

Date

## ABSTRACT

### MINI ROBOTIC ARM BASED ARDUINO AND VISUAL BASIC 6.0 FOR ARDUINO MICROCONTROL LEARNING IN ATMI CIKARANG

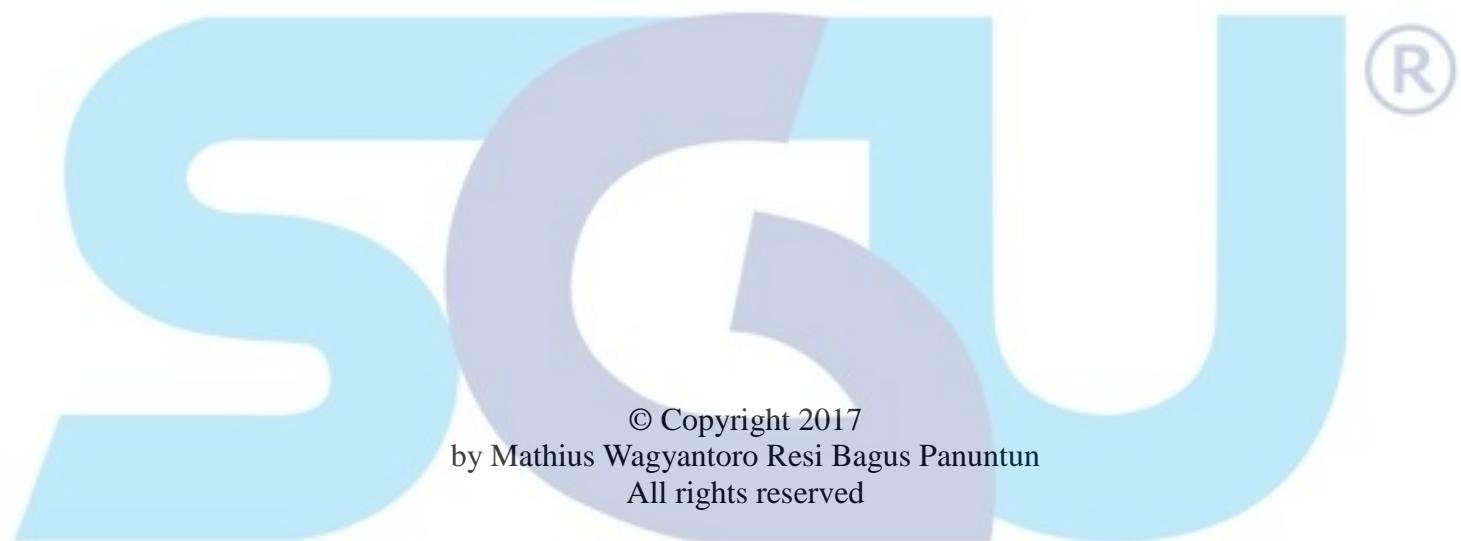
By

Mathius Wagyantoro Resi Bagus Panuntun  
Edi Sofyan, B.Eng., M.Eng., Ph.D, Advisor  
Ir. Surjo Abadi, M.Sc., Co-Advisor

SWISS GERMAN UNIVERSITY

Microcontroller is a kind of courses in mechatronics concentration. In this course, students learn about the basics of microcontroller and how to control a system with microcontroller. Not only theoretical, but also practice. There are many types and brands of microcontroller. But during this time, microcontroller which is used for education course in ATMI is only Atmega Microcontroller. To improve student's knowledge about microcontroller, there will be an additional course about another microcontroller in student's diatomic practice. ATMI need a simple hardware which is completed with user interface to support that course. Based on this case, the author will try to make a Mini Robotic Arm Based Arduino and Visual Basic 6.0. This project started with literature review of relevant journal, mechanical hardware design, electrical hardware design, software design. Anthropomorphic 3 Revolute Joint manipulator arm is choosen as the mechanical hardware, arduino uno board as the electrical hardware, Arduino IDE and Visual Basic 6.0 as the software, and support material about inverse kinematic. This project has successfully create Mini Robotic Arm Hardware and Software which can move from initial point to desired position. Then the analytical method will be, angle error value, coordinate error value.

*Keywords:* Arduino, Visual Basic 6.0, Microcontroller, Robotic Manipulator.



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## DEDICATION

I dedicate this works for the better,  
The smarter,  
The greater,  
ATMI Cikarang.



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Praise and thanks to my Lord, my Friend, almighty Jesus Christ for blessing my whole life so that this thesis titled “Mini Robotic Arm Based Arduino And Visual Basic 6.0 For Arduino Microcontrol Learning In ATMI Cikarang” can be finished well. The author would like to say thank you very much with all the humility to all people who give their pray, support, aid, and guidance in finishing this thesis.

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**SWISS GERMAN UNIVERSITY** Author,

Mathius Wagyantoro Resi Bagus Panuntun

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