

CERTIFICATE

The Project title “Microcontroller Based Robotic Arm Control”

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ACKNOWLEDGEMENTS

First of all, we are grateful to the almighty Allah to allow us to complete this project successfully.

Our sincerest thanks will go to our project supervisor Md. Atiqul Islam for providing us with continuous support, guidance and valuable instructions all the time during our project work. We are also grateful to our honorable teacher Professor A. M. Rezaul Karim Talukder, head of the Department of Electrical & Electronic Engineering, Stamford University Bangladesh for his valuable advice & encouragement.

We would also like to thank all of our teachers at the department for their sincere guidance and teaching that lead us to this level.

Our heartiest thanks will also go to Professor Bashir Uddin, Dept. of EEE, Stamford University; Professor Abdur Rashid Sarker, Department of ME, BUET; Engg. Masudur Rahman, BUET; Md. Saiful Islam, Owner of United Electronics; Engg. Khairul Bashar, Director, Acute Electronics Club for their generous help and support in solving some problems.

Special thanks to our dear friends Ripon and Shimul for their continuous encouragement and valuable suggestions in many regards.

Finally, all credits are for our parents and our brothers and sisters for their moral support, inspirations and deep love towards us to complete this project.

ABSTRACT

In our contemporary world of science & technology, most of us are going for automation. Robotics covers a large area in the automated world and robotic arm has become popular in the world of robotics. Robotic arm can do such operations which are difficult & dangerous for human (e.g. removing mines, mining operations and so on). Even robotic arm is doing critical surgery of brain. In our project of robotic arm, our main intention was to control it by the microcontroller. By doing this we miniaturized the control section of the robotic arm. And it has to mention that we built our robotic arm by using the rejected and waste materials of our daily life which can pollute our environment. As a result, we reduced the production cost of the robotic arm and minimized the pollution of environment. Our robotic arm is three dimensional which can grab, carry and release small objects from one place to another. The essential part of the robotic arm is a programmable microcontroller which is capable of driving basically three stepper motors design to form an anthropomorphic structure. In the project we interfaced the robotic arm stepper motors with the programmed 8051-based microcontroller (AT89S52) which is used to control the robot operations. We have tested our robotic hand using both the C and assembly language program.

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