



**Project Report**

**Project: Voice Control Robot**

**Course Code: CSE 316**

**Submitted To**

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**ABSTRACT**

**DECLARATION**

We, the undersigned, hereby proclaim that the task entitled "**Voice Control Robot**" submitted for the level of Bachelor of Science and Engineering in the personnel Computer Science and Engineering of Bangladesh University of Business and Technology is our unique work. We affirm that it contains no material which has been acknowledged for the honor to the applicants of some other degree or recognition, aside from where due reference is made in the following of the venture. As far as we could possibly know, it contains no materials previously distributed or composed by some other individual, except where due reference is made in this project work.

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**CERTIFICATION**

This project “**Voice Control Robot**” report submitted by Yasir Rabbani Tanvir, Raihan Sheikh Joy, Pervej Khandakar, M.Ridwane Islam Roky , Abu Rayhan Emon, Mejbahul Islam Murad, Shema Akter and Shahinur Islam Popystudents of Department of Computer Science and Engineering, Bangladesh University of Business and Technology (BUBT), under the supervision of Nourin Khandaker, Lecturer, Department of Computer Science and Engineering has been accepted as satisfactory for the partial requirements for the degree of Bachelor of Science Engineering in Computer Science and Engineering

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**Lecturer & Project Supervisor**

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**DEDICATION**

Dedicated to our parents for all their love and inspiration.

**ACKNOWLEDGEMENTS**

We extend our heartfelt gratitude to our supervisor, Lecturer Nourin Khandaker ma'am, for his unwavering support, invaluable guidance, and profound insights throughout this project. His expertise and mentorship were indispensable in our success.

We also thank our colleagues and friends for their discussions, suggestions, and feedback, which greatly contributed to the project's improvement. We acknowledge the pioneers in our field whose work inspired us.

Lastly, we express our deepest appreciation to our family for their unwavering support and love, which fueled our determination. We dedicate our achievements to them.

**APPROVAL**

This work, titled "**Voice Control Robot**" submitted by Yasir Rabbani Tanvir, Raihan Sheikh Joy, Pervej Khandakar, M.Ridwane Islam Roky, Abu Rayhan Emon, Mejbahul Islam Murad, Shema Akter and Shahinur Islam Popy students of the Department of Computer Science and Engineering at Bangladesh University of Business and Technology (BUBT), under the supervision of Nourin Khandaker, Lecturer, Dept. of CSE, has been thoroughly examined and evaluated. It is hereby approved as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science Engineering in Computer Science and Engineering.

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**1. INTRODUCTION**

**1.1 Project Definition**

We're building a robot that listens to your voice using Arduino, L298N, and Bluetooth HC-05. There's a handy app on the Play Store that controls this robot.

**1.2 Project Objectives**

Teach the robot to understand and do things with your voice using the Play Store app.

Connect the robot's brain (Arduino) to its muscles (L298N) for smooth moves.

Make sure the robot and the Play Store app can chat without any wires.

The robot should be super quick in following your voice commands.

**1.3 Project Specifications**

The team: Arduino, L298N, Bluetooth HC-05.

Using an existing app from the Play Store.

**2. BACKGROUND STUDY**

**2.1 Existing System**

Many robots need buttons or help to do things. Our robot is different – it follows your voice commands.

**2.2 Need for the System**

We want a robot that understands and does what you say without needing buttons – simple and fun.

**2.3 Proposed System**

Using Arduino, L298N and Bluetooth HC-05, we're making a robot friend. The Play Store app makes it even cooler.

**2.4 Scope of the Project**

Our focus is on making the robot move with your voice. Fancy features can come later.

**2.5 Feasibility Study**

We checked if it's doable and not too expensive. Challenges like voice understanding and Bluetooth talking are all figured out.

**3. SYSTEM DESCRIPTION**

**3.1 Block Diagram of the System**

[Insert Block Diagram Here]

**3.2 Design of Each Block and Select the Best Alternative**

Arduino: The smart brain that learns from your voice.

L298N Motor Driver: Helps the robot move just like you say.

Bluetooth HC-05: Lets the robot and the Play Store app talk without wires.

**3.3 Testing of Each Block**

Check if Arduino gets your voice commands right.

Make sure L298N moves the robot how you want.

Test if Bluetooth HC-05 talks well with the Play Store app.

**3.4 System Implementation**

Put all the robot parts together like a puzzle.

Teach Arduino to understand your voice commands.

Connect the robot and the Play Store app using Bluetooth.

**4. SYSTEM IMPLEMENTATION AND TESTING**

Share how we built the robot.

Show you some bits of the code we used.

Tell you what worked well and what needed figuring out during tests.

**5. CONCLUSION AND RECOMMENDATION**

**5.1 Conclusion**

Our robot friend now moves with your voice, its motors are smooth, and it talks happily with the Play Store app.

**5.2 Future Recommendation**

Maybe teach the robot to avoid things in its way.

Make it understand even more words when you talk.

Check if there's a better way for the robot and the Play Store app to talk.

**APPENDIX**

Extra details and cool pictures go here.

REFERENCES