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**International Conference
on
Emerging Aspects of Manufacturing,
Thermal and Design Engineering
(MATHED-2022)**

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Department of Mechanical Engineering

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The conference is named as (MATHED-2022). The conference intends to provide a general platform to various academicians, scientists, researchers, research scholars and industry persons throughout the globe working in the broad areas of Mechanical Engineering (Design, Thermal and Manufacturing Engineering) and allied areas to exchange and share their experiences and researches with the world.

Design and Development of Robotics Arm

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Abstract. System and design manufacturing concern to human talents are rapidly incorporated in the working task to cater to the quick surge of human requirement with the advent of technology innovation at its pinnacle. The current research paper focuses on development of a robotic arm being used in industries to minimize the human errors and increase efficiency, productivity, precision of the operations. It is operated with an Android phone via a mobile application. The complete process is design to perform a specific task. The robot arm moves in four directions: up, down, left and right, depending on the commands which gave in the programming language. The robotic arm movement is controlled by using servo motor, which has been mounted on various part of the robot. The usage of a Bluetooth module to control a mobile application developed on an Arduino UNO microcontroller as to get easily access and make more comfortable, flexible for various industrial operations because laborers or workers enhance the manufacturing capacity and gives more efficient product. The goal of research to make robotics arm which used for flexible automation, the degrees of freedom of a manipulator used for the picking of an object and placing it at specified position which shown in the programming language. To make robotics arm to picked up and placed workpiece. The arm in this study is made up of four joints, four links, and four servo motors that drive the robot arm. The essential control signals for servo motors are generated using the Arduino Microcontroller. The pick and place robot arm system's control is extensively tested in real time, and the findings reveal that the system has a precise control system for good system performance

Keywords: Arduino UNO, Servo Motor, Bluetooth Module, Mechanical Arm.

1 Introduction

Automation is one of the most crucial aspects for development in the industrial world. It aims to eliminate the requirement for people by developing additional assistive technologies that can boost productivity and efficiency [1]. Automation is a field that creates and fabricates complex equipment that is utilized on a daily basis by individuals who require auxiliary machines in places where their strength is insufficient. For innovations in the technology, without human interface the machines can work entire

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Certificate

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