

# Robotic Arm Coffee Maker

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**ABSTRACT:** *Now, the sector is getting smarter and smarter a day. People are looking for more simplicity and warmth in their lives. For the convenience and convenience of living, everyone is searching for the simplicity of all their life. That's why the value of new edge technology is granted. These new edge innovations are evolving very rapidly. One of the benefits of this type technologies offer more convenience and simplicity with day-to-day operations. Robotics is one of a kind of technology that is gaining a lot of popularity in a variety of life practices. The use of industrial robotics is growing on a regular basis in the food, consumer products, plastics and electronics industries, but is still largely concentrated. The goal of the robotic arm coffee maker was to create a light robot design using lightweight materials such as PVC pipe, ACP sheet and Aluminium.*

**KEYWORDS:** *Manipulator, Remotely Controlled, Robotic Arm, Technology.*

## INTRODUCTION

A Robot is a virtually intelligent agent capable of executing tasks with the aid of certain supervision. In reality, the robot is actually an electro-mechanical mechanism that is operated by computer and electronic programming[1]. Robots can be categorized as autonomous, semi-autonomous and remotely controlled. Robots are commonly used for a range of activities, such as gas stations, cleaning drains and tasks that are deemed too risky to be done by humans. The robot arm is a robotic manipulator, typically programmable, with similar functions to a human arm. This robotic arm is programmable in design and can be controlled. The robotic arm is often often referred to as anthropomorphic because it is very similar to that of a human limb. Humans today carry out all the activities of the industry on their own[2]. However, a robotic arm may be used for different activities such as welding, blasting, and spraying and many more. A self-sufficient robotic arm is manufactured using components such as microcontrollers and motors. This raises their running speed and reduces the difficulty of the operation.

Robots are now a very busy day in the world of emerging technology. People are in the quest to find answers in any field of life with the help of robotics. One of the new developments is the use of robotics in the food industry. Robots are ferment javas, the new technological trend moving for the removal of labor shortages and the ever-increasing cost of labor. Unmanned cafes and pubs, furnished with a similar mechanism, are no longer mere visions of the future. It seems like the robot revolution is well underway in the food industry, with robots mastering the professional tasks done by humans. In Boston, the robots replaced the cooks. In Prague, machines that accept instructions from an interface are dislodge and serve. In Denver, they take orders from fast-food machines, taking care of the art that has been in human hands for thousands of years. Eliminating human efforts from buying a cup of coffee is one of the company's marketing points[3].

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A French drip pot appeared in 1800—an infusion brewer of improved style by Jean Baptiste de Belloy. The system consists of two different sections: a jar for a portion of fresh-ground beans and a dripping drinking vessel. A tissue filter was provided between the pieces. Making drip pot joes involves pouring water, a boil or around 100 degrees, into the upper container and then unloading the lower vessel to fill the cup with a fresh hot mix. The shortcoming in this approach is that the water cools when it drips from section to section[5].



**Figure 1: Coffee maker robotic arm [6]**

### *1.1 Robotic Arm Used In Various Applications*

*1.1.1* The robotic arm can be programmed to do whatever sort of thing you want. Tasks such as welding, squeezing, rotating, etc (Figure 1). For instance, robot arms in the vehicle assembly line execute a number of functions. Such as workmanship and rotation and positioning of pieces during the assembly process[7].

*1.1.2* The Space Shuttle Remote Manipulator Device have a multi-degree freedom with autonomous arms used to execute a variety of activities, such as Space Shuttle inspections for special use Deployed boom with cameras and sensors attached the last effectors.

*1.1.3* Robot weapons can be autonomous or regulated Manually which can be used to perform a wide range of activities of considerable precision. The robotic arm may be fixed or fixed Mobile (i.e. wheeled) which can be built for industrial applications. Robotic hands have also been built-in Pressure sensors that inform the machine how hard it is. The robot is gripping a single thing. This is holding the Robot's going to drop or smash whatever it holds.

*1.1.4* In medical research, "Neuroarm" uses miniaturised instruments. Like, for example, laser scalpels with pinpoint precision that can soft tissue manipulation, needle penetration, Suture, and cauterization[8].

### *1.2 Purpose for using robot coffee*

#### *1.2.1 Consistency would ensure consistency.*

One of the greatest features of a robot arm coffee maker is that it produces products of stable quality and accuracy. When the software and the brewing facilities have been set properly and nicely, there can be no accident or fault during their operating hours. High accuracy and repeatability is what the robots are fantastic at. Only leaving all the work to them, the consistency of the coffee can be assured, and the customers obtain reliable and fine brewing results. Equally, when it comes to brewing coffee, consistency and repeatability are always the most important things. With robot arm coffee makers, the customers will never have to think about a new flavor.

#### *1.2.2 Versatility saves more time*

Besides making coffee, a robot arm coffee maker acts much like a human being. With robot arms with up to 8 degrees of freedom of movement, this allows agility that is equal to your arms. When attached to the coffee counter, a robot arm coffee maker can finish just about anything, like loading and grinding coffee beans, managing coffee machines, and even serving drinks to customers. The flexibility gives you too much comfort and saves your battery.

## LITERATURE REVIEW

A robot arm coffee maker lets people produce coffee automatically using an electronic manipulator. It's much about the shape and purpose of the upper arms. Back in the days, robotic arms were mainly used for industrial production. Today, with creative concepts, traders are bringing robot weapons into the coffee producing industry. They can be used as robot arm coffee makers with correct programming and brewing equipment[9].

## DISCUSSION AND CONCLUSION

The purpose of the robotic arm coffee maker was to build hardware and software for the robotic arm powered by the accelerometer. From the observation that has been concluded, it clearly indicates that the movement is very precise, reliable and easy to monitor and user-friendly. It's cheap and the cost of building a robot is minimal. This is why robots can be mounted in every cafe. Exploiting common-sense physical information Strengthened transition algorithms across significantly different families Tasks. The Robot Assistance Arm would have to be able to contribute to much of the problems of our everyday lives. The resulting setup, however, is not guaranteed to be human-like. The potential scope of the Robotic Arm is to be commended. Patients that are paralysed from the neck will control robotic arms with their emotions. It's going to be able to steer a mechanical arm to pick up a bottle of coffee and bring it to her lips. It was the first time she had been able to drink without any help in almost 15 years. There will be a thriving need for a robotic arm in the military, industrial among many others.

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