

# Applications in Automation and Robotics

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## Editorial

Because of automation and robotics, the world is changing. In recent years, many industries have seen an increase in interest and demand for technical solutions. Thousands of businesses are looking for ways to use robotics and automation to improve their business models, whether due to the COVID-19 pandemic, labour shortages, or supply chain issues. Automation and robotics have an impact on everything from how people move to how their favourite things are made [1].

## Construction

Construction will be one of the most popular automation and robotics applications. Despite being one of the least digitised industries in the past, this industry has been embracing more modern technology in recent years. This is due to the need to fill gaps created by persistent labour shortages while also improving efficiency and addressing rising project demand. The bipartisan US Infrastructure Bill passed in 2021 will contribute to a growing demand for automation and robots in construction as companies work on many future initiatives [2]. Automation and robots in construction are commonly used for automated rebar stringing, painting, site surveying, laying bricks, and even driverless resources hauling.

## Packaging and shipping

As businesses work on a variety of future initiatives, the bipartisan United States For decades, the transportation industry has been interested in automation, but making self-driving cars a reality has proven difficult. This is due to the sheer complexity of roadways, as well as the time required to properly train an AI vehicle [3]. Several companies have been testing.

## Groceries and food

Automation and robotics are being used more in the restaurant and grocery industries than many people realise. Businesses have been embracing technology in order to develop novel ways to improve consumer experiences and even create new business models.

## Manufacturing

Manufacturing is well-suited to automation and robotics. Robotic Process Automation (RPA) has been steadily growing in popularity in recent years.

Because the manufacturing process is frequently continuous and large-scale, automated production is the ideal method for producing more products in less time and with higher quality. Manufacturers will need all the help they can get to boost production and deal with slow supplier deliveries due to the current supply chain issue [4]. Robotic production lines, autonomous quality assurance, and collaborative robotics are critical to achieving this.

## Health care

The healthcare industry has had a difficult few years, but automation and robotics may help alleviate some of the stress. Robots are now having a big impact. During the COVID-19 outbreak, autonomous UVD cleaning robots became popular for keeping workplaces clean despite having fewer employees. These robots are now being used in classrooms and other non-healthcare settings. Another breakthrough is robotic surgeons, which are improving the safety and reducing the negative effects of surgery [5]. Robots are even being used in senior care to help fill staffing gaps while also socialising the elderly.

## Conflict of Interest

None.

## References

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