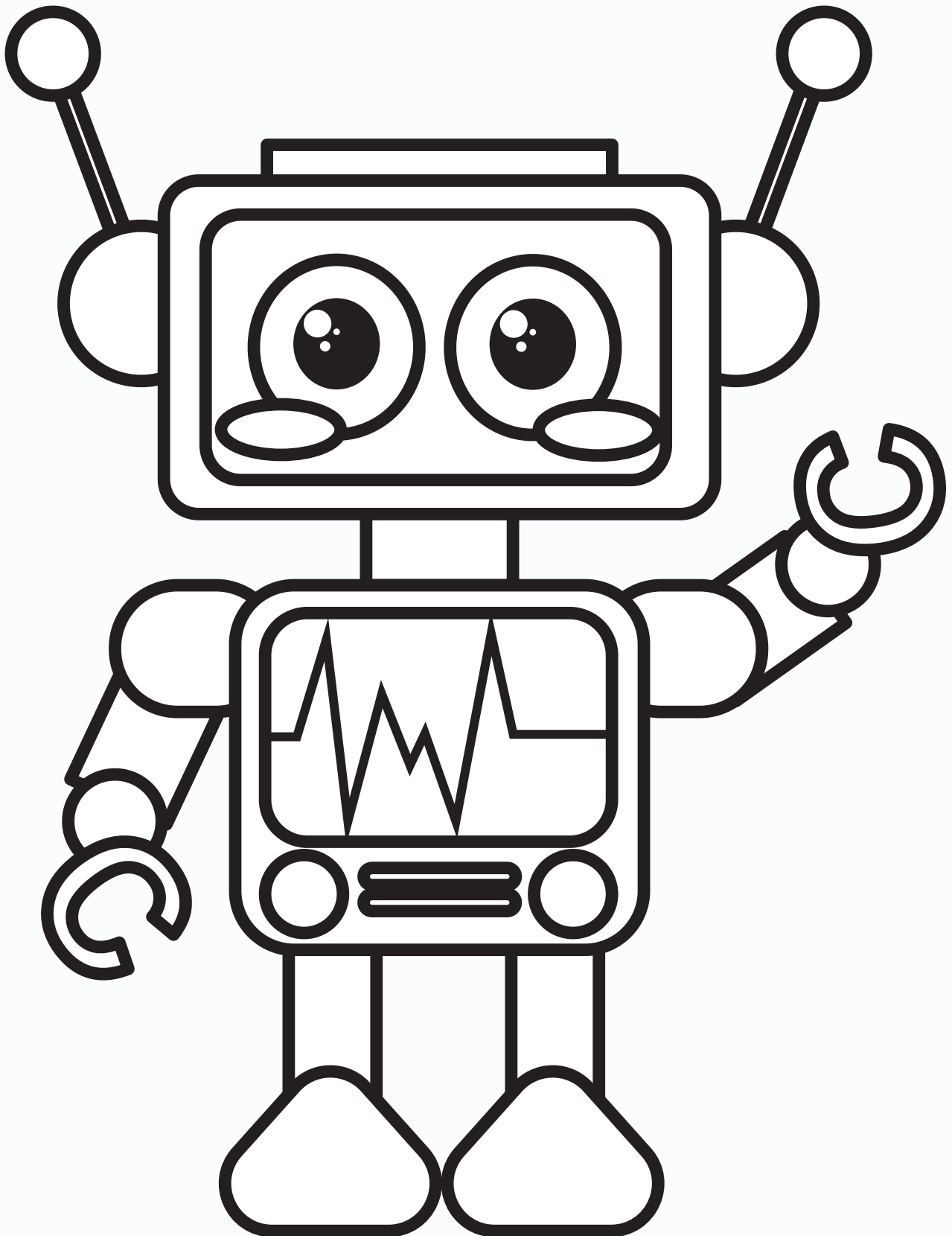


# I M R O B O T



COLOR ME AS PER YOUR CHOICE OF COLOR

# About the **AUTHOR**



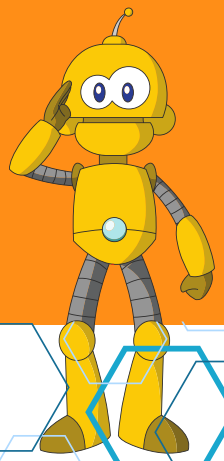
I am a passionate Electronics and Communication Engineer with over five years of experience in the dynamic field of robotics education. With a profound enthusiasm for robotics and an unwavering dedication to teaching, I have been committed to transforming the way young minds understand and engage with technology. As a seasoned STEM trainer, they have guided countless students in discovering the potential of robotics, encouraging curiosity, creativity, and critical thinking.

This book, **Basics of Robotics**, is a step towards making robotics accessible to everyone. With clear explanations, hands-on projects, and insights gained from years of teaching, I hope to build a community of young learners who are excited about using technology to make a difference. Whether you're a curious beginner or a budding engineer, this book will provide the foundations needed to embark on an exciting journey in robotics.

## Thanks

# WHAT IS A ROBOT?

## IN SIMPLE LANGUAGE



### POINT 1

A robot is a machine that can do the tasks automatically, it copy what human do and also can perform those task which is risky for humans. They do their work very accurately and repeatedly, without getting tired or bored.

### POINT 2

A robot senses its surrounding and then take decision according to the programming done inside it for certain situations.

### POINT 3

Robots follow these 3 simple steps as human also do:-



Sensing

Planning

Action

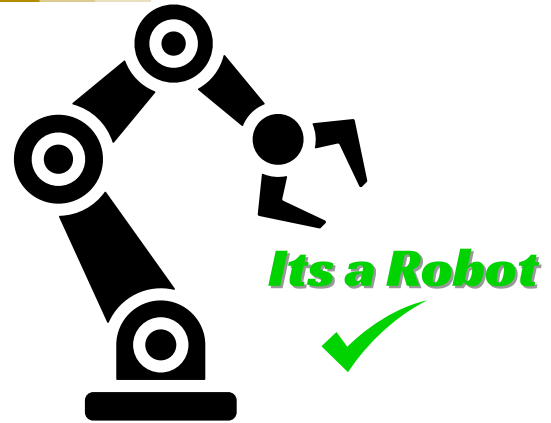


# WHOM DO WE CALL A ROBOT & WHOM DO WE NOT?

HERE ARE SOME EXAMPLES OF WHAT WE WOULD CALL A ROBOT:

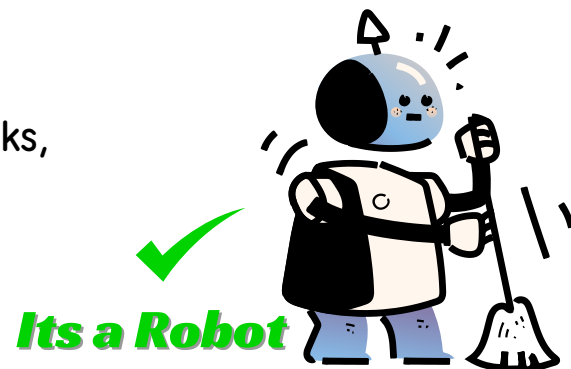
## INDUSTRIAL ROBOTS:

These are used in factories to assemble products, weld, and paint.



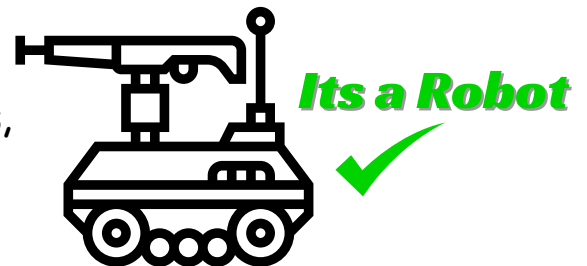
## SERVICE ROBOTS:

These are used to assist humans in various tasks, such as cleaning, delivering packages, and providing medical care.



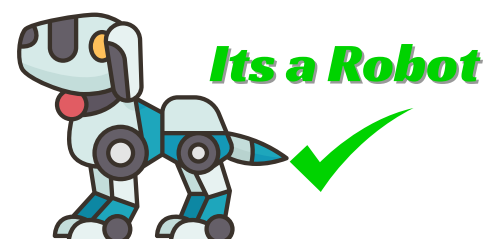
## MILITARY ROBOTS:

These robots are used for dangerous jobs like searching for enemies, removing bombs, and fighting.



## ENTERTAINMENT ROBOTS:

These are used for entertainment purposes, such as toys, games, and performances.

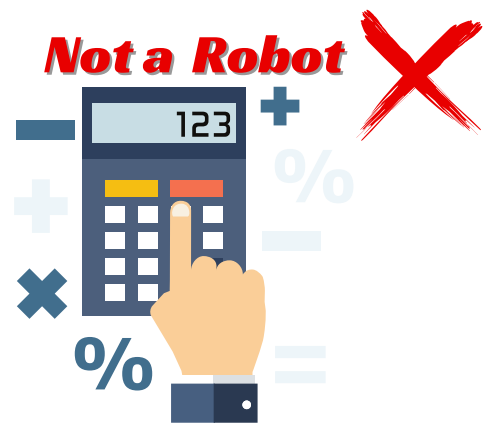


# WHOM DO WE CALL A ROBOT & WHOM DO WE NOT?

HERE ARE SOME EXAMPLES OF WHAT WE WOULD NOT CALL A ROBOT:

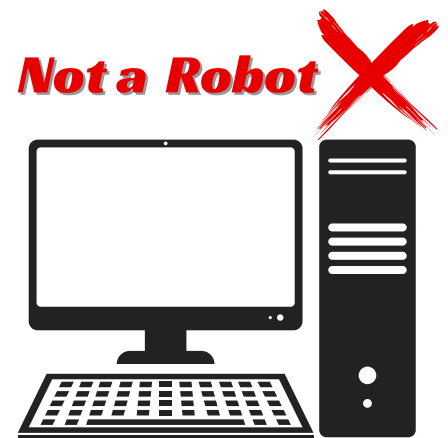
## CALCULATOR

This is a tool for performing mathematical calculations, but it does not perform physical actions or imitate human behavior.



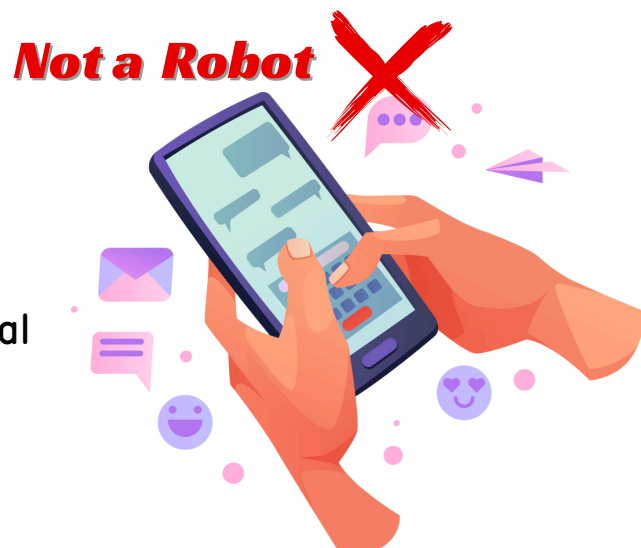
## COMPUTER

This is a machine for processing information, but it does not have a physical body or perform physical actions.

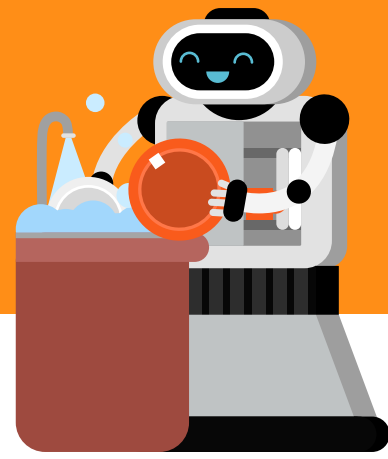


## SMARTPHONES

This is a device for communication and entertainment, but it does not have a physical body or perform physical actions.



# HOW ROBOTS HELP US AT HOME?



Robots help us at home in a variety of ways, **making tasks easier**, **more efficient**, and **sometimes even more fun!**

Here are some common examples:

## VACCUMING & CLEANING

**Vacuum Robot:-** These robots can autonomously clean floors, navigate around furniture, and return to their charging stations when they're done.



**Mopper Robot:-** The Robot mops can clean hard floors by scrubbing and mopping, saving you time on routine cleaning tasks.

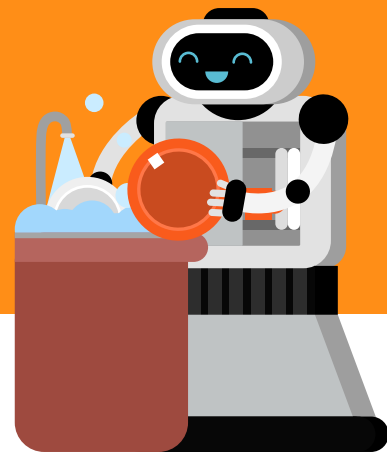


## LAWN MOWING

**Lawn Mower Robot:-** Its a machine which will keep your garden/lawn neat and clean by trimming the grasses and all.



# HOW ROBOTS HELP US AT HOME?



Robots help us at home in a variety of ways, **making tasks easier**, **more efficient**, and **sometimes even more fun!**

Here are some common examples:

## ASSISTANCE ROBOT

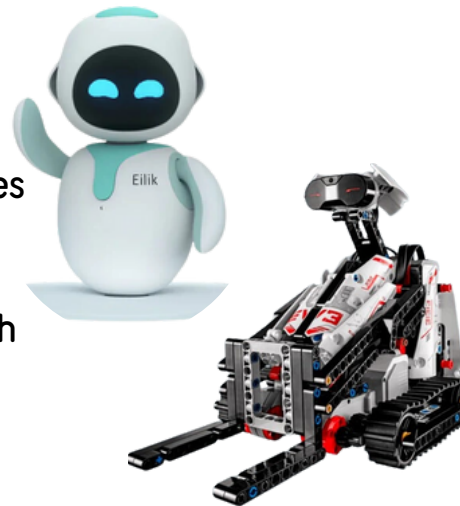
**Assistance Robot:-** Assistive robots can help with things like getting things for you, opening doors, or reminding you to take your medicine. They help people to do tasks on their own and live more independently.



## ENTERTAINMENT & EDUCATION ROBOT

**Educational robots** can teach children through interactive games and activities, making learning fun and engaging.

**Entertainment robots** play music, tell jokes, and interact through games to keep you entertained. They can also provide companionship and make learning fun.

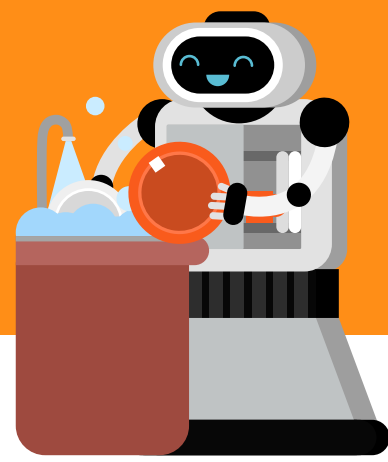


## LAUNDRY ROBOT

**Cloth Folding Robot:-** A cloth folding robot helps by automatically folding clothes after they've been washed and dried, saving time and effort.



# HOW ROBOTS HELP US AT SCHOOL?



Robots help us at School in a variety of ways, **making tasks easier, more efficient, and sometimes even more fun!**

Here are some common examples:

## TEACHING ASSISTANCE

**Teaching assistance robots** can help students learn by providing personalized instruction, answering questions, giving feedback, and making learning more engaging.



## LIBRARY MANAGEMENT

**Library management robots** can help manage books, assist patrons in finding books, and even check out and return books, making library operations more efficient and convenient.



## GREETING ROBOT

**Greeting robots** can welcome parents, answer their questions, provide directions, and schedule appointments, making the reception process efficient and friendly.

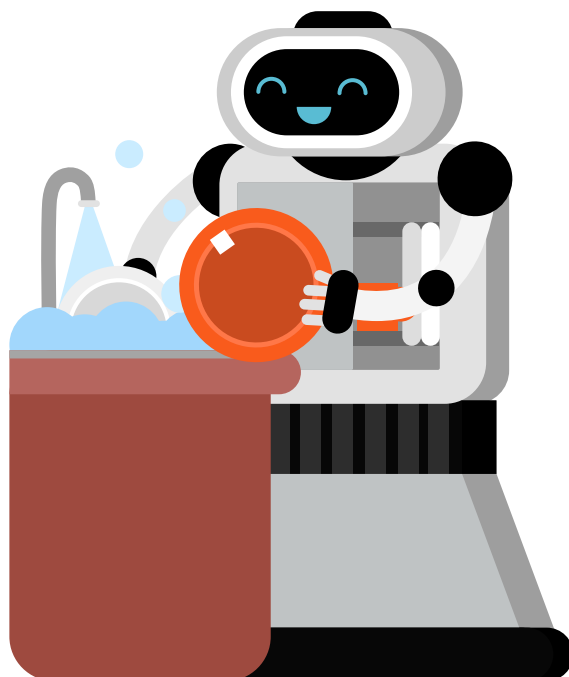




# THANK YOU FOR YOUR TIME

For more Information, you can refer to my YouTube  
Channel:-

**Robotics Villa**



By:- Er. Ashutosh Kumar

