

Introduction To Robotics

By

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Let's begin!

First thing appears in our mind when we hear the word 'Robot'

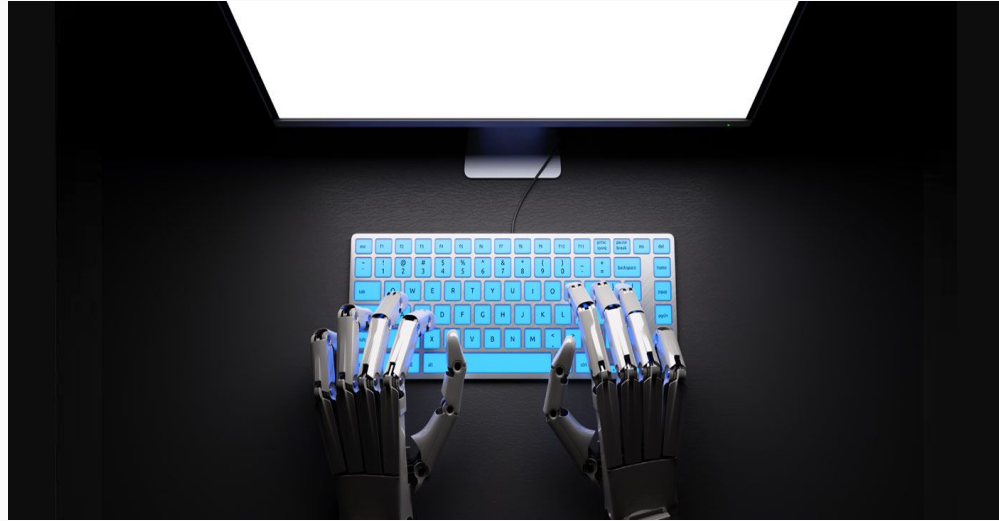


What Robot Actually is?

A **machine** capable of carrying out a complex series of **actions** automatically, especially one **programmable** by a computer.

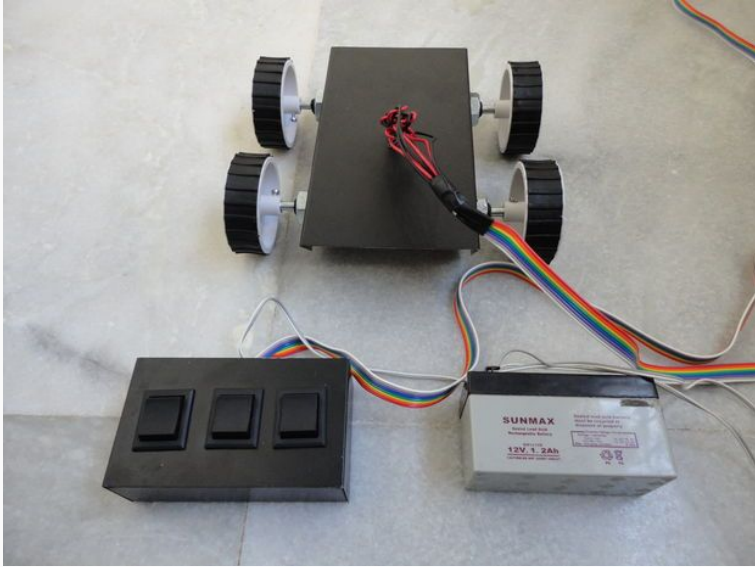
Why do we need robots?

- Dangerous Tasks
- Impossible Tasks
- Repetitive Tasks
- Robots assisting the handicapped
- Dirty Tasks ;)

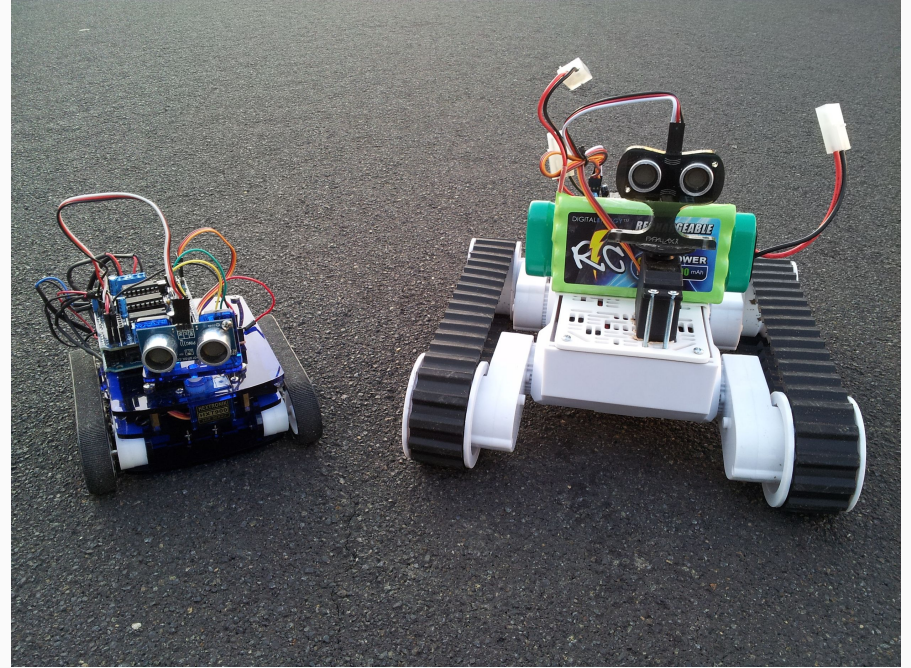


Rewrites its' own code to
increase its intelligence

Varieties of Robots

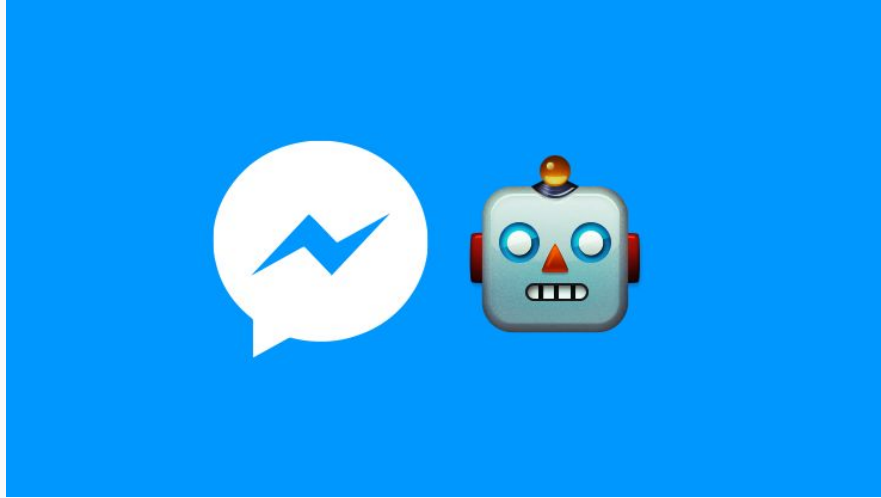


Manual Robot



Autonomous Robot

Varieties of Robots



Virtual Robot



RC Robot

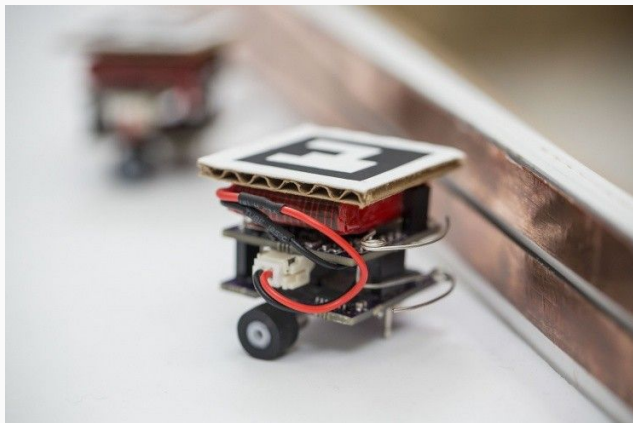
Varieties of Robots



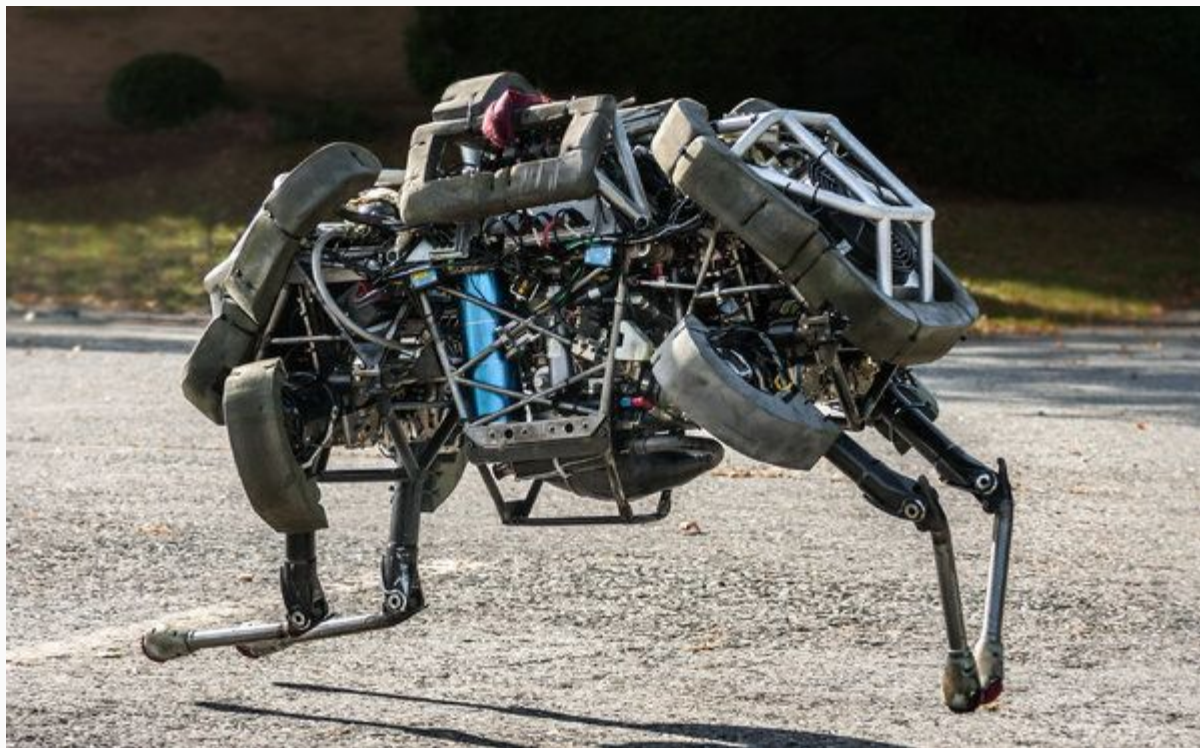
Industrial Robot



Intelligent Robot

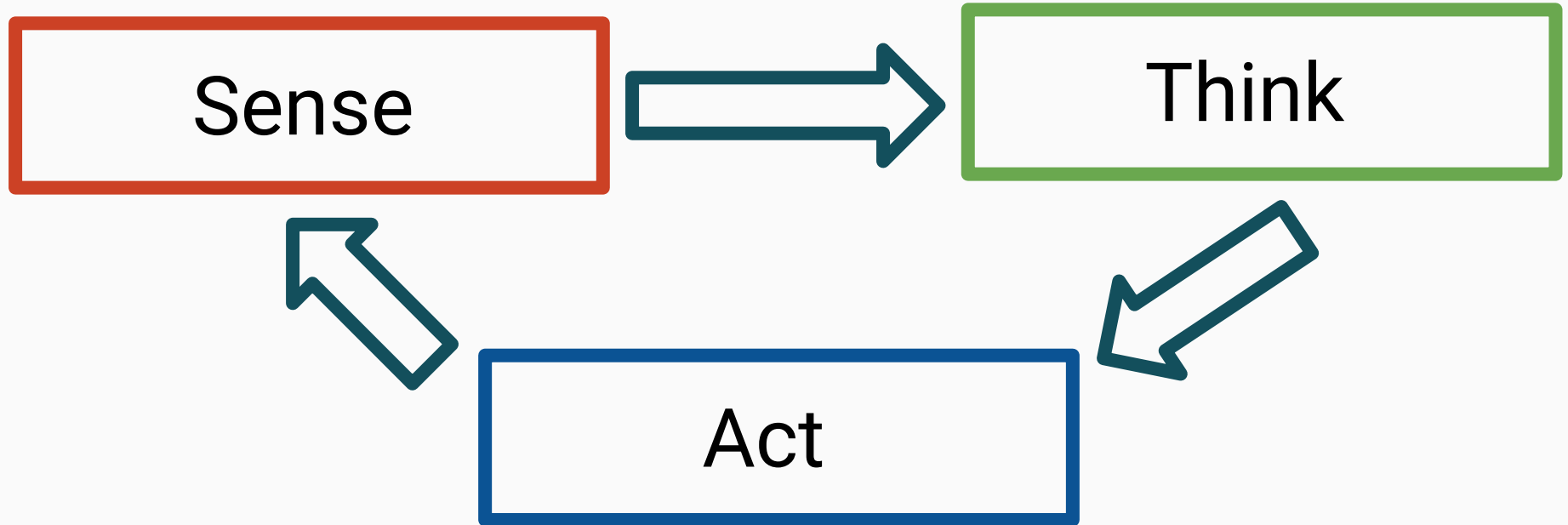


Small robot



Large Robot

Robot action flow



- Mechanical Structure
- Motors
- Power
- Sensors
- Processing Unit
- Memory Unit
- Firmware

Let's know about
robots by answering
some questions!

How Robots Move?

Wheels

How wheel
rotates?

Motors

How motor
runs?

Electrical Energy

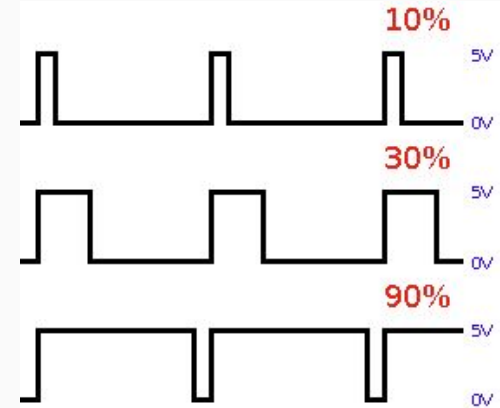
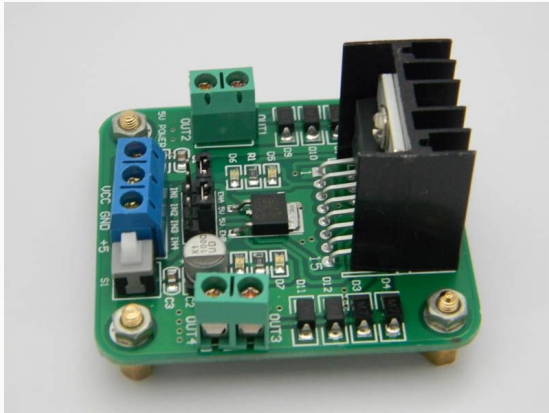
How to vary speed of the motor?

Motor drivers & PWM

How to generate PWM signals?

Microcontrollers

Summary



Circuit arrangement

