

How Robots Work

Robots are sophisticated machines designed to perform tasks automatically. Essentially, they are electro-mechanical devices that use **sensors** to collect information about their surroundings, much like our eyes and ears.

These machines are incredibly useful, helping people by taking over dangerous or repetitive jobs in manufacturing, surgery, and exploration. **First**, a robot's sensors (like cameras or pressure pads) gather data about the environment.

Next, this data is sent to the robot's internal **computer** (often called the controller), which processes the information according to a pre-programmed set of instructions.

Then, the controller decides on the appropriate action, sending a command signal to the **actuators**, which are the motors and joints.

Finally, the actuators move the physical parts of the robot (such as an arm or wheel) to execute the task, like picking up an object or performing a weld. I believe that robots are a necessary innovation for the future, especially as they make workspaces safer and increase