NEED FOR ROBOTS:

The increasing need for robots' system from their ability to enhance productivity, efficiency, safety and quality across various industries. Robots are particularly valuable in automating repetitive, dangerous or physically damaging tasks, ultimately improving overall operational performance.

- ❖ NEED FOR ROBOTS:

1) SAFETY:

HAZARDOUS ENVIRONMENT:

Robots can handle dangerous tasks in environment that are unsafe for humans, such as working with toxic chemicals, in high-radiation areas or in disaster zones.

REDUCED RISK OF ACCIDENTS:

By taking over repetitive or physically demanding jobs, robots can significantly reduce the risk of workplace accident and injuries.

2) PRODUCTIVITY AND EFFICIENCY:

24/7 OPERATION:

Unlike humans, robots can work continuously without needing breaks, increasing overall production output and efficiency.

INCREASED SPEED AND PRECISION:

Robots can perform tasks with greater speed and precision than humans, leading to higher quality products and reduced waste.

AUTOMATION AND REPETITIVE TASKS:

Robots can automate tedious and repetitive tasks, freeing up human workers to focus on more complex and creative work.

3) SPECIFIC APPLICATION:

MANUFACTURING:

Robots are widely used in manufacturing for tasks like welding, assembly, painting and material handling.

HEALTHCARE:

Robots assist in surgery, drug delivery and patient care, improving accuracy and efficiency in medical procedures.

LOGISTICS AND WAREHOUSING:

Robots are used for tasks like orderfullfillment, inventory management and transportation of goods.

AGRICULTURE:

Robots can help with tasks like planting, harvesting weeding and monitoring crops, addressing labor shortages and improving efficiency.

SPACE EXPLORATION:

Robots are crucial for exploring dangerous and remote environments, such as outer space and other planets.

SEARCH AND RESCUE:

Robots can be used to locate survivors in disaster zones, navigate hazardous terrains and assist in rescue operations.

4) ADDRESSING LABOR SHORTAGES:

FILLING CRITICAL ROLES:

Robot can help fill labor shortages in various industries by taking on tasks that are difficult to staff with human workers.

AUGMENTING HUMAN WORKFORCE:

Robots can work alongside humans, augmenting their capabilities and improving overall productivity.

5) ADVANCING TECHNOLOGY:

INNOVATION AND DEVELOPMENT:

The development of robot drives innovation in various fields, including material science, artificial intelligence and sensor technology.

POTENTIAL FOR FUTRURE APPLICATION:

As technology continuous to advance, the potential for robots to transform our world and address global challenges is vast.

APPLICATION OF ROBOTS:

Robotics has a wide range of applications across different industries and sectors. Some of the most notable applications of robotics include:

1. MANUFACTURING: Robotics is widely used in manufacturing to automate repetitive tasks, increase productivity and improve quality. Robots are used in assembly lines, welding, painting, and other manufacturing processes.
2. TRANSPORTATION: Self-driving cars, drones, and autonomous vehicles are examples of robotics applications in transportation. They are being developed to improve safety, reduce traffic congestion, and increase efficiency.
3. HEALTHCARE: Robotics technology is increasingly being used in healthcare to assist with surgeries, rehabilitation, and other medical procedures. Robots can also be used to help with tasks such as monitoring patient vital signs and administering medication.
4. AGRICULTURE: Agricultural robots are being used to plant and harvest crops, monitor crop growth, and perform other tasks to increase efficiency and reduce labor costs.
5. CONSTRUCTION: Robotics technology is being used in construction to automate tasks such as bricklaying, concrete pouring, and other labor-intensive tasks.
6. SPACE EXPLORATION: Robotics technology plays an important role in space exploration as it can be used to explore other planets, moons, and asteroids.
7. SERVICE INDUSTRY: Robotics technology is used in the service industries such as hotels, malls, banks, etc. to provide customer service like answering queries, providing information, and guiding customers.

8. MILITARY AND DEFENSE: Robotics technology is being used in military and defense to perform tasks such as surveillance, reconnaissance, and bomb disposal.