

How robotics impact 9 of the world's toughest jobs



THE DIRTIEST, DANGEROUS, AND DULLEST JOBS



Medical

1. Surgery

As robotic systems evolve, surgeons can perform procedures on patients even when they are not in the same location. This expands the reach of healthcare to underserved populations, creating a more equitable delivery of expertise while avoiding long-distance travel to dangerous and isolated locations.

2. Sanitation

After patients have been treated, a robot destroys germs that are left behind in hospital rooms. Sanitizing rooms lowers the risk of infections for patients and healthcare workers.

3. Patient Care

Telepresence robots allow doctors and nurses to move around and see and speak with patients without being physically present. Healthcare providers can also treat patients while avoiding harmful pathogens and dangerous locations.



Commercial

4. Inspecting Wind Turbines

Robots crawl wind turbines to inspect blades that spin hundreds of feet in the air, often above open water. Human operators can safely monitor wind turbines from the ground, cutting costs and potentially increasing turbine lifetime.

5. Farming

Agricultural robots spray pesticides so farmers can stay safe and focus on higher-level tasks like business planning and crop management. Robot sprayers are more precise, reducing waste and the risk of spraying the wrong plants.

6. Material Handling

Autonomous mobile robots use a combination of algorithms and computer vision to move heavy items in warehouses and manufacturing plants. Goods are moved safely and reliably, protecting workers and moving the production lines along efficiently without the risk of human error.



Defense

7. Inspecting Ship Hulls

An autonomous BIOSwimmer™ inspects ship hulls for explosives, tracking devices, or contraband. Security personnel avoid the dangers of diving underwater, where it is often difficult to get around, communicate, and breathe.

8. Carrying Heavy Ammunition

Soldiers wear assistive devices called exoskeletons, which can be equipped with robotic components. The exoskeletons bear the weight so soldiers can avoid fatigue and focus on strategic decisions and situational awareness.

9. Search and Rescue

After a disaster, robots traverse uneven surfaces and use infrared sensors to find signs of life. Rescue workers can locate survivors and save them from life-threatening situations.

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