Prosthetic limbs

Hugh Hurr is an avid mountain climber who lost his legs in an accident, and has since been working at MIT to build advanced prosthetic limbs for amputees. AI is used to detect "intent" in a phantom limb's movement.

1

Rehabilitation

2

Hocoma is a medical equipment company that created Lokomat, an AI powered pair of robot "pants" that help to retrain people with spinal cord injuries to walk again. By stimulating a patient's legs, that pings the brain.
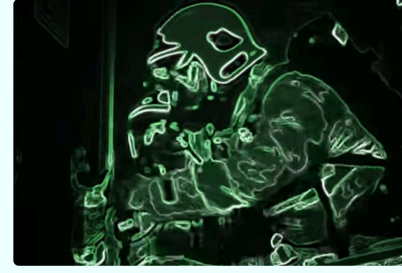
Healthcare companions

Aldebaran Robotics has created a bot called Pepper, which can assist people with memory issues, such as those affected by Alzheimer's. It can provide social interaction and set reminders to take medicines.

3

Thermal imaging

4

Sam Cossman's company Qwake Technologies has been pioneering the use of AI thermal imaging helmets to help firefighters "see" in smoke filled buildings. This enables them to maneuver more safely and quickly.
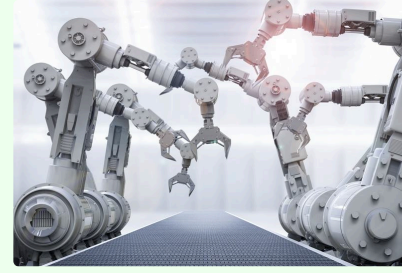
Self-driving vehicles

Many companies, including Audi, GM, Nvidia, Tesla, Volvo, and Waymo are pioneering autonomous vehicles. Combined with public transport, there is potential. This will especially help those with vision impairments.

5

Automated manufacturing

6

Companies such as FANUC Robotics, Universal Robotics, and Yaskawa Electric are enabling more efficient manufacturing with industrial robots. They perform rote, repetitive building tasks with precision.
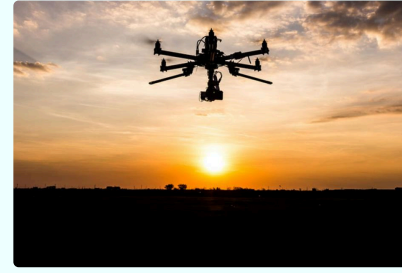
Warehouse and inventory bots

Amazon uses hundreds of robots at its various delivery centers around the world. This allows distribution to run at nearly 100% capacity, reducing human error. It also helps to maximize profits while having lower margins.
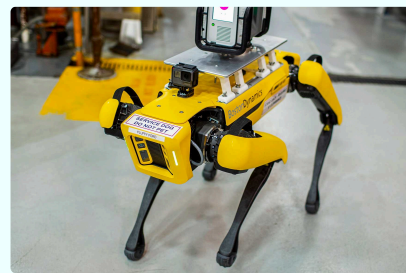
7

Drones and mapping

8

Companies like DroneSense and Neurala employ AI with drones, which can help to monitor areas for safety. Farmers can also make use of drones to keep tabs on how crops are growing and when to optimally harvest.

General purpose "danger" bots

Boston Dynamics has been pioneering humanoid and four-legged robots. These can be used in a variety of ways, such as search and rescue endeavors, or performing other tasks that may be dangerous.

9

Roomba and utility bots

10

At the lower end of the AI scale, utility robots from companies like Roomba perform basic tasks. This has the potential to free up humans for more meaningful and/or thought intensive creative endeavors.

A.I. ADVANCEMENTS - ROBOTICS

Robotics (n): The science or study of the technology associated with the design, fabrication, theory, and application of robots. — **Artificial intelligence (n):** A branch of computer science dealing with the simulation of intelligent behavior in computers.

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LTEC 6240 - MAY 2021