A new age is upon us. An age of AI, Machine Learning, Biotechnology, Robotics, etc. We see these concepts play a huge role in our everyday life.Robotics might not be human-friendly but it is a promising field in technology. It's applications cut across every industry we could think of, from manufacturing to the educational industry, even to everyday human interactions. E.g Sophia. Before we move forward, let's understand the term robotics.

What is a Robot? It is simply a machine capable of carrying out a complex series of activities in a human-like manner.

What is Robotics? It is a branch of technology that designs, constructs complex machines (robots) to perform tasks.

It is no new notion that in the next ten years, the number of displaced individuals from their jobs will have increased exponentially and replaced with autonomous robots.The less technical workers are laid off but the technical workers are retained. With the pandemic of the recent year, we can see how our world is moving from a time where we would need human contact for almost everything being done to a time when human contact is limited. The recent happenings has shown the world the way technology is and will still continue to impart our everyday life. Robots will take the place of receptionists, factory workers, tasks requiring repetition,sales workers, bar attendants, etc. Companies are looking for ways to minimize cost while maximizing their profit. We would see a period where they would acquire these robots at optimized prices and do away with humans. Humans are known to be unpredictable with unpredicted actions, but industries are looking for ways to have consistent outcomes and improved results. Though the present-day robots are incapable of carrying out some real complex stuffs.It should be noted that as improvement in artificial intelligence are made particularly machine learning and deep learning, we would see robots in almost all industries in the world performing tasks that were previously known impossible

Robots need three elements to carry out complex tasks.These are:

1. Sensors: A sensor detects changes in its environment. It converts stimuli such as heat, light, sound and motion into electrical signals. These signals are passed through an interface that converts them into a binary code and passes this on to a computer to be processed.
2. Lidar: It stands for Light, Detection and Ranging. It is a way of measuring distances by illuminating the target with laser light and measuring the time the reflection of the light takes to return to the sensor.
3. Actuator: It is responsible for moving and controlling a system.Different robots use different types of actuators depending on its application. Pneumatic, Hydraulic, Piezoelectric,etc. The most common is the Pneumatic and Hydraulic.

Applications of Robotics

1. Manufacturing plants: In large production plants with processes that risk the lives of its workers.Robots step in, reducing the risk of death and performs these tasks.Robots are built to operate 24/7 thereby increasing the productivity of the firm.
2. Medicine: We see robots performing surgery excellently with precision and accuracy, tasks that would have been difficult for humans. Prostheses are already in use, to help humans go about their lives. Prostheses are benefitting considerably from new structures and control systems. Robotic limbs with bionic skin and neural systems

are allowing a remarkable degree of user control. Robotic exoskeletons (orthoses) are finding use in rehabilitation, assisting paralyzed people to walk and to correct for malformations. Robots are also finding a place in keeping hospitals clean as hospital rooms are being disinfected with the use of high intensity UV light applied by a robot. Robots are used to admire patients their drugs, reducing human contact to the barest minimum

3. Military: Military robots are now designed and built. It's design is built separately to fit the military's intrinsic needs. Military drones are sometimes used as bombs, used to survey the area of your enemy's encampment, detect snipers activities, detonate bombs and a lot more
4. Agriculture: Robots are used for harvesting and picking. They can also be used for mass planting.
5. Pharmaceuticals: Robots are proving advantageous in filling, inspection, packaging, laboratories, and the manufacture of personalized medicine. Automation, including automated inspection and packaging, is becoming an increasingly important part of pharmaceutical manufacturing.allow technicians and pharmacists to spend less time manually finding prescriptions and more time with patients
6. Space: Robots assist humans in some tasks. They can't eat or sleep, so they come in handy. When travels are needed to be made to other planets that humans can't go to,robots can carry out these research for us while being controlled from base. They help install and maintain complex scientific instruments and to conduct field exploration.e.g Humanoid 2.

As I end this article, I leave this question to us all - "Will Robots ever surpass human intellect?"