



# Astro Robot

## Why in News

Recently, **Amazon** has unveiled its '**Astro**' home robot, which is designed to help customers with a range of tasks like home monitoring and keeping in touch with family.

- However, civil society has highlighted the **concerns of privacy** issues of **24x7 surveillance**.

## Key Points

### ▪ About Astro Robot:



- Astro is primed to be a **home security device**. It is **designed to move around the home** and keep a check on pets, and detect something unusual in the absence of the owner.
- It comes with a **“periscope”** camera that pops up from its head and can be used to keep an eye on the home.
- It is basically a combination of the **Echo Show (smart speaker)** and **sophisticated Ring security camera** integrated into one single device.
- The device captures live videos, recognises faces, plays music or videos, and delivers a beer across the home.
- It can **recognise the faces of people and analyse them** until it figures out if it's a family member or an outsider.

### ▪ Issues Related to Privacy:

- Civil society is worried that the **amount of data** Amazon gets to fetch with the Astro, giving the company easy access to the household,
  - This is going one step beyond Alexa which had access to vocals and sound until now.
  - Amazon has asserted that **Astro stores face data locally** rather than in the cloud, but it is still a privacy concern as with any internet-connected device.
- There are **concerns of stealing or hacking of the device**. Due to this, the perpetrator

- can get access to the digital map that the robot creates of someone's home.
- The prime concern, in the long-run, could contribute to greater public acceptance of **Artificial Intelligence**-powered surveillance.
  - In the past, hackers have managed to access Ring cameras, used in the devices of Amazon technologies.
- **Other Recent Experiments:**
  - Softbank earlier this year "suspended" the production of **Pepper**, one of the first humanoid robots able to "read" emotions.
  - Jibo has started an **Indiegogo project**, which aims to build a world's first social robot for the home.

## Robotics

- **About:**
  - **Robotics** is a branch of engineering that involves the **conception, design, manufacture and operation of robots**.
    - Robot is any **automatically operated machine** that replaces human effort.
    - The objective of the robotics field is to **create intelligent machines** that can assist humans in a variety of ways.
- **Advantages:**
  - In many situations robots can **increase productivity, efficiency, quality and consistency** of products.
  - Robots **can work in environments which are unsafe for humans** as they don't have the same environmental requirements that humans do - such as lighting, air conditioning or noise protection.
  - Robots have some sensors/actuators which are **more capable than humans**.
    - Unlike humans, robots don't get bored. Until they wear out, they can do the same thing again and again.
    - They can be very accurate - to fractions of an inch (as is needed for example in manufacturing of microelectronics).
- **Disadvantages:**
  - The use of robots can create **economic problems if they replace human jobs**.
  - Robots can only do what they are told to do - **they can't improvise**
  - This means that **safety procedures are needed** to protect humans and other robots.
  - Although robots can be superior to humans in some ways, **they are less dexterous than humans**.
    - Robotics **lack emotional intelligence**, which plays a critical role in intense situations.
  - Often robots are **very costly** - in terms of the initial cost, maintenance, the need for extra components and the need to be programmed to do the task.
  - **Surveillance concerns** pose a problem of entering a privacy nightmare.

**Source: IE**