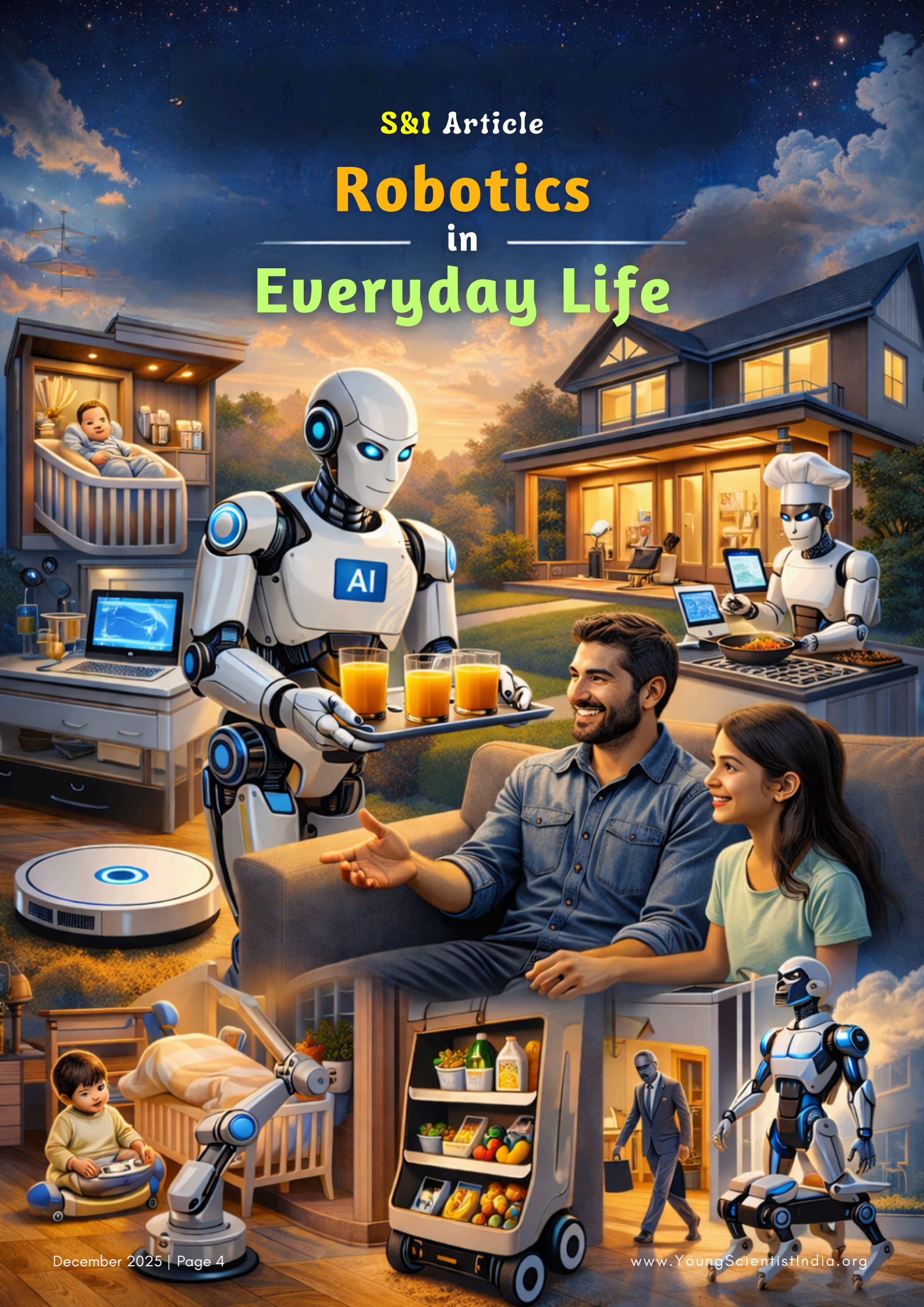
S&I Article

Robotics in Everyday Life



When you hear the word robot, what comes to your mind? A shiny metal humanoid from a movie? A talking machine from the future?

Surprise! Robots are already living among us – not as superheroes, but as hardworking helpers quietly making our daily lives easier.

Let's explore how!

🏠 Robots at Home

Have you seen a small, round machine moving around the floor, cleaning dust without anyone pushing it? That's a robot vacuum! It uses sensors to detect walls and furniture, maps the room, and cleans on its own.

Even washing machines and dishwashers use robotic automation. They follow programmed instructions to wash, rinse, and spin all without constant human control. So next time your clothes are washed while you're studying, thank a robot!

🏭 Robots in Factories

Most of the cars, phones, and toys we use are built with the help of robots. Large robotic arms lift heavy objects, weld metal, and assemble parts with incredible precision.

Why use robots in factories?

- They work faster.
- They don't get tired.
- They can handle dangerous tasks.

This doesn't mean humans are replaced. Instead, humans design, program, and supervise robots. It's teamwork between people and machines!

🏥 Robots in Hospitals

In some hospitals, robots assist doctors during surgeries. These robotic systems allow doctors to perform operations with greater accuracy and smaller cuts.

There are also robotic wheelchairs, rehabilitation robots, and even robots that deliver medicines inside hospitals.

Imagine a robot helping someone walk again after an injury, that's robotics changing lives.

🚗 Robots on the Road

Self-driving cars use robotic technology, cameras, and artificial intelligence to detect traffic signals, pedestrians, and other vehicles.

Delivery robots are being tested in many cities. Instead of a delivery person, a small robot rolls up to your door with your food order!

📱 Robots in Your Pocket?

You might not see it, but even your smartphone uses robotic principles. Face recognition, voice assistants, and automated features are all part of robotics and AI working together.

When you say, "Set an alarm for 6 AM," and your phone listens, that's intelligent automation in action.

🤔 So, What Is a Robot Really?

A robot is simply a machine that can sense its surroundings, make decisions, and act - either automatically or with minimal human control.
It doesn't have to look like a human. It just needs to:

1. **Sense** (using sensors)
2. **Think** (using programs or AI)
3. **Act** (using motors or movement)

🌟 Why This Matters for You

Robotics is not just for scientists in labs. It's for problem-solvers - students like you.

Can you design a robot that waters plants automatically?
Or one that sorts garbage into recyclable and non-recyclable bins?

Robotics combines science, creativity, coding, and imagination. It helps us solve real-world problems.

The future isn't about robots taking over the world. It's about humans and robots working together to build a smarter, safer, and more efficient planet.

And who knows?
The next robot that changes the world might be designed by you. 🚀

Sudoku Challenge 2512

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2		3					5	
			4		2	9		7
		2	8		6			9
9			1		4	6		
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				1		7	6	

(Answers on Back Cover Inside)