

Mini Case Studies: AI in Action

Case Study 1: AI in Healthcare

Artificial Intelligence (AI) is changing the way doctors care for patients. In hospitals, AI programs can study thousands of medical images, such as X-rays or MRI scans, much faster than humans. This helps doctors spot problems like broken bones, tumors, or infections more quickly and sometimes even more accurately.

AI also supports doctors by predicting which patients might need extra care. For example, it can analyze a person's medical history to find signs of possible heart disease before it becomes serious.

However, there are challenges. AI depends on the data it is trained with. If the data does not include people from all groups, the AI might make mistakes or miss important details. Also, doctors and patients need to trust AI, which means the technology must be carefully tested and used responsibly.

Questions

1. Who uses AI in healthcare?
2. How does AI help doctors and patients? (Give two examples.)
3. What issues or challenges can arise when using AI in healthcare?



Case Study 2: AI in Transportation

AI is also transforming how people travel. One of the most famous examples is the self-driving car. These cars use AI to “see” the road with sensors and cameras, then make decisions such as when to stop, turn, or change lanes. This technology could make roads safer by reducing human errors that cause accidents.

AI is also used in public transportation systems. Some cities use AI to predict traffic patterns and adjust traffic lights. This reduces traffic jams and makes travel more efficient for buses, cars, and emergency vehicles.

But there are challenges. Self-driving cars must be tested very carefully to make sure they can handle unusual situations, like sudden weather changes or unpredictable human drivers. There are also questions about responsibility—who is at fault if an AI-driven car causes an accident?

Questions

1. Who uses AI in transportation?
2. How does AI help with travel? (Give two examples.)
3. What issues or challenges can arise when using AI in transportation?