

The AI ??system helps detect plastic waste in the ocean through satellite images

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Artificial intelligence (AI) is playing an increasingly important role in helping to solve urgent human problems such as security, health, education, climate change or environmental pollution . New Here, scientists have successfully tested an AI system that can detect areas contaminated with plastic waste in the ocean with high accuracy by analyzing images obtained from rotating satellites. around the earth.

Initial test results show that this system can accurately detect even small clumps of plastic waste floating in coastal waters, greatly saving time and effort of detecting waste and beach cleaning.

Currently, the AI ??system mainly studies images collected by the European Space Agency's Sentinell-2 satellites (ESA), to detect plastic clumps / debris floating in the oceans. all around the world. These floating plastic dumps absorb and reflect light, creating very special spectral cues. This is the element that the AI ??system relies on to detect and distinguish them from other types of floating objects.



Detect waste at sea from satellite imagery

In the experiment, the scientists gave the AI ??algorithm an analysis of images taken in the waters around Canada, Scotland, Ghana and Vietnam. As a result, the system can distinguish between floating plastic and natural materials such as seaweed with an average accuracy of 86%.

Currently, the team plans to improve the technique so that it can accurately detect floating plastic debris in turbid coastal waters and even in estuarine areas with more complex flows.

In the near future, the researchers hope the method will be used in conjunction with unmanned aircraft to monitor plastic waste pollution and support large-scale cleaning activities. However, the most effective measure certainly still comes from our own consciousness. Please limit the use of plastic to the maximum extent, do not throw waste indiscriminately into the environment, join hands for a green world not only for the lives of all species, but also for generations to come.

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