Identification of the Locations of Waste in Oceans and Seas Through Artificial Intelligence Integration. (Robocean)

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Currently, there are 5.25 trillion microplastics and 269,000,000 kilograms of waste in oceans and seas. This increase in pollution leads to the death and even extinction of aquatic life. We propose the Robocean project as a solution; Commercial ships are always active in oceans and seas, allowing for the detection and monitoring of garbage islands. By integrating JavaScript-based TensorFlow library into these ships and installing Robocean systems with cameras, garbage islands can be identified using images from the camera as ships pass within a 10km range and their locations are ensured through GPS modules. The data obtained from garbage islands is then transferred to a database. Thus, this information is transmitted to garbage collection ships through a user-friendly Web Interface. Each garbage collection ship can select the nearest garbage island to clean. Additionally, the Interface facilitates integration among all garbage collection ships, eliminating confusion by showing which ship will collect any given garbage island for other company and organization ships. As a result, the Robocean project ensures the fastest, most efficient, and simplest way to collect the most garbage in the shortest time possible.

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