iFarm | Photo source Pixabay

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FACIAL RECOGNITION SYSTEM ENABLES FARMERS TO TRACK FISHES' HEALTH

SCIENCE & ENVIRONMENT

A digital database will store the features of individual fish for identification and to track their health.

We have seen biometric recognition systems introduced to recognise people by their footsteps and to monitor student emotions in class. Now, a company in Norway has developed a facial recognition system for fish coined iFarm. It uses the pattern of spots around the fish's eyes, mouth and gills to tell them apart. Norwegian fish-farming giant Cermaq Group AS is hoping to use the technology to prevent the spread of sea lice and other fish diseases. These diseases currently cost the global fish-farming industry around 1 billion USD each year.

Cermaq has described the system as a "revolution" in fish farming. Salmon need to periodically rise above the water surface to gulp air. This helps them to regulate their buoyancy. As the salmon rise above the water, the iFarm directs them through a funnel fitted with sensors at the water surface. The sensors then screen the salmon and record their features. If the scanners pick up anything abnormal, such as the presence of sea lice, the infected fish can be quarantined for medical treatment. In this way, only the fish that are ill will receive treatment. This avoids unnecessarily stressing the fish.

Machine learning algorithms identify individual fish and compare scans to check for abnormalities. Cermaq claims the system could cut mortality by as much as 70 percent. This would also increase yields and profitability. The company hopes to have the system running in around six years, once it receives the appropriate licenses from Norway's Ministry of Fisheries.

Takeaway:
The global aquaculture industry is worth around 232 billion USD yearly. But farming exposes the fish to diseases they are not equipped to fight off. As a result, large sums are now being invested in research to make the fish less vulnerable to disease, including the iFarm. What other types of farming could benefit from a biometric similar system?