The Marinexplore and Cornell University Whale Detection Challenge

Create an algorithm to detect North Atlantic right whale calls from audio recordings, prevent collisions with shipping traffic

$10,000 · 245 teams · 4 years ago

Overview

Read the summary of the competition for a quick overview of the impact of the results.

We depend on shipping industry's uninterrupted ability to transport goods across long distances. Navigation technologies combine accurate position and environmental data to calculate optimal transport routes. Accounting for and reducing the impact of commercial shipping on the ocean's environment, while achieving commercial sustainability, is of increasing importance, especially as it relates to the influence of cumulative noise "footprints" on the great whales.

Marinexplore is organizing the Planet's ocean data with the leading community of ocean professionals. One of the important datasets consists of acoustic recordings that can be used to detect species inhabiting the global ocean. Knowledge about animal locations can be utilized in industrial operations.

Cornell University's Bioacoustic Research Program has extensive experience in identifying endangered whale species and has deployed a 24/7 buoy network to guide ships from colliding with the world's last 400 North Atlantic right whales.

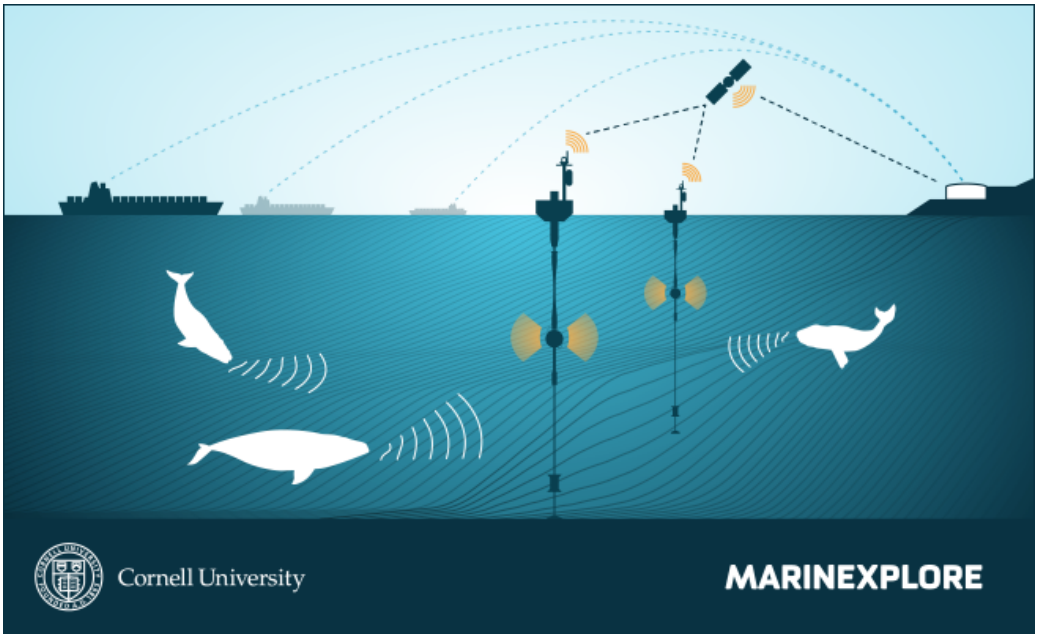

Illustration of ships navigating safely around the habitat of whales.

Right whales make a half-dozen types of sounds, but the characteristic up-call is the one identified by the auto-detection buoys. The up-call is useful because it's distinctive and right whales give it often. A type of "contact call," the up-call is a little like small talk--the sound of a right whale going about its day and letting others know it's nearby. In this recording the up-call is easy to hear--a deep, rising "whoop" that lasts about a second:

Right whale up-call

Marinexplore and Cornell researchers challenge YOU to beat the existing whale detection algorithm identifying the right whale calls. This will advance ship routing decisions in the region.

[For details on the buoy network see a paper published by Acoustical Society of America.]

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245 Teams

309 Competitors

Points **This competition awarded standard ranking points**
Tiers **This competition counted towards tiers**