# JOIN THE SMART OCEAN

Harness Artificial Intelligence and Machine Learning in the Ocean Economy

**DeepSense**

## The ocean economy attracts some of the smartest people in the world.
### Shouldn't its technology be as smart as the people who use it?

## Artificial Intelligence and Machine Learning help companies grow and innovate.
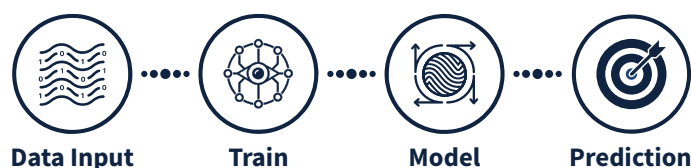
**It's easy to say. And hard to do.**

DeepSense unites the next generation of AI and machine learning experts with companies that want to harness the potential of data and lead the smarter ocean economy. By leveraging technology and research, companies can more easily use data to make decisions, optimize operations, and create new products, processes or services. All with low cost and low risk.

**Ocean Organization** — **Ocean & AI Researchers**

**The outcome**
Together, we drive innovation, commercialization, job creation and economic growth in the ocean sector.

## Train a machine to learn from past experience.

Machine learning, a subset of artificial intelligence, allows a system to learn from data without being programmed explicitly.

To generate insight, it requires a vast amount of data, but can identify patterns not easily found by humans. Machine learning can mimic a human skill, automate tasks, and learn based on the data input and output provided to it. It doesn't learn like a human, it learns based on the information it's fed and how it's programmed to learn.

**Data Input** ⋯ **Train** ⋯ **Model** ⋯ **Prediction**

## Benefits of AI and ML.

· Increased or new revenue
· Improved customer experience
· Reduced costs
· Improved accuracy
· Automated manual tasks

· Reduction in human error
· Reallocation of skill resources
· Immediate prediction and decision making

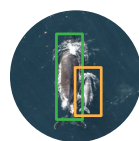## Efficiency is closer than you think.

**Examples of AI and ML in action.**
Machine learning and artificial intelligence have been around for decades. But new and exciting advances are possible today thanks to access to both computing power and enormous quantities of data.

### Automatic Identification System (AIS)
Used on commercial ships, machine learning models trained with AIS data uncover illegal activities, make predictions about arrival times, and plan routes for the shipping industry.

### Computer Vision
From detecting and predicting corrosion to identifying species, biomass, or facial recognition, computer vision is a machine's high-level classification of images and videos.

### Natural Language Processing
Translating text and other data (like manifests, social media data, and project records) into clear, unified, understandable information provides value to companies, from making assets more reliable and available to identifying failures early.

### Prediction and Redundancy
A redundancy model helps create safer passage for ships navigating harbours by understanding and predicting sea conditions based on oceanographic and meteorologic data.

## Our Approach.

### Finding your way forward.

DeepSense can create a roadmap for any ocean sector business who wants to do more with their data. Here's how.

### Identify Opportunity

New ideas are identified through companies themselves, as well as researchers and industry partners.

### Create Partnership

We'll help identify the academic and ocean-related industry partners to support the project idea.

### Scope Project

We support the detailed planning, including a statement of work, defining deliverables, identifying data sources, and finding funding opportunities.

### Research & Deliver Prototype

Academics (including masters students, PhD students and postdocs) work with you to build an AI or ML solution, and we provide data science expertise, infrastructure, and software as needed.

### Operationalize and Grow

Once the code, proof of concept or prototype is delivered, the company can operationalize the solution or product to accelerate growth and opportunity.

## Be part of a data driven future.

### We work with any organization within the ocean sector.
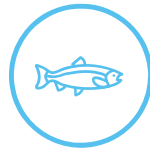
Transportation

Military & Defense

Tourism

Sensors & Acoustics

Aquaculture

Autonomous systems

## No matter maturity, DeepSense can help.

### A machine learning project is only as powerful as the data a company brings.

Regardless, if an organization wants to start by collecting data, or if they have advanced data analysis, our services offer a broad range of support.

· We can help advance data readiness and better position a company to leverage the benefits of machine learning in the future.

· We can develop commercially useful predictive machine learning models, analytical prototypes or proof of concept.

· We remove the barriers to AI or ML adoption by identifying use cases, matching the right expertise with the right business, and creating capacity for new projects and ideas.

**DeepSense**

**Find out how DeepSense can make AI and ML possible for you.**
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