90% of world trade is dependent on shipping, meet Orca AI, making the industry safe and autonomous

As part of our quick fire questions series – or QFQs – we spoke to Yarden Gross, cofounder and CEO at Orca AI about unmanned vessels, improving safety in crowded waterways and bringing technological advances to maritime navigation.

My childhood was surrounded by water. Growing up, sailing was one of my biggest passions, and by the time I was 17, I was already a licensed skipper.

This passion inspired me to enlist in the Isaeli Navy, which is where I first met my cofounder Dor Raviv, who by the end of his tenure was specialising in unmanned vessels.

We kept in touch after I left to try my hand in the automotive industry, which was just starting to go into the autonomous field and we started talking about what was needed to bring autonomous capabilities to the shipping industry. From there *Orca AI* was born.

How exactly is Orca AI increasing navigation safety?

Orca AI's technology helps both the crews on board and the management on shore, get an accurate, real-time view of the environment by combining computer vision and deep learning with existing onboard systems. These tools assist crew members in making more informed navigation decisions and improving safety in crowded waterways. Moreover, Orca AI bridges between ocean-going ships to the shoreside infrastructure providing shipping companies with actionable insights, alerts and recommendations about the safety of their fleet.

Is safety a major concern to shipping companies?

90% of world trade is dependent on the shipping industry. Therefore, ships are the lifeline of global commerce – and vessel safety is critical. Every year, more than 4,000 ship incidents occur and the predominant cause is human error. This creates three major international issues: Billions of dollars in damages, environmental harm and supply chain delays.

Compared with other sectors' technological advances, maritime navigation is lagging. Shipping crews are still primarily using Radar, AIS (AIS presents various data from sensors on the ship), and electronic maps. All this means that sea navigation is mainly based on the human eye's input and human interpretation, despite the fact many times waterways have low or even zero visibility.

There has been huge growth in autonomous vehicles in the past ten years and now also the shipping industry has taken on this trend with Orca AI playing a central part.

Back in May, our platform completed the world's first autonomous commercial ship voyage in congested waters. We enabled a cargo ship to navigate completely autonomously, avoiding a total of 400 to 500 ships in one of the

world’s busiest shipping lanes – Tokyo Bay.

This was a huge, unprecedented milestone for us and for the shipping industry, which certainly motivated us and other shipping companies to keep developing autonomous capabilities. Truth be told, this achievement also has the entire sector in expectation of entering full ship automation into the mainstream.

Now that the company has already completed a fully autonomous commercial voyage across one of the world’s most congested lanes. What is next for Orca AI?

Our aim is to make navigation as safe as possible, and that entails increasing our presence across a large number of fleets.

We’re currently working with an extensive number of world-leading companies such as Maran Tankers, TMS Gas, Enesel, Wartsila and NYK, however, it’s crucial to continue rolling out the platform across different shipping brands and vessels to build an increasingly smarter solution.

As our platform operates across a larger number of shipping companies and vessels, it collects more data about how ships operate at sea. Ultimately, this means we’re building the most robust events catalogue for crews to navigate safely, and start exploring full automation.

Yarden Gross is cofounder and CEO at *Orca AI.*

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