

Shipping transformation with Artificial Intelligence and Machine Learning

The Challenge

Shipping is one of the most volatile markets in the world, with the commercial oil tanker market in particular subject to huge demand-supply side shocks and impacted by changes in the overall macro-economic and geo-political environment. Unpredictability in oil prices creates huge shifts for the industry — where a negative price drives a surge in the demand for floating storage — and consequently a surge in product tanker earnings.

On the supply-side, variables such as the age of the fleet relative to the pace at which new vessels come online, increasing competition, and more stringent shipping regulations across different maritime routes, are amongst the many challenges that ship owners and operators are contending with. But perhaps one of the most important challenges is controlling fuel costs, a key, raw material for tankers, to maximise operating profit per voyage. Vessel operators are therefore increasingly turning to Artificial Intelligence (AI) and Machine Learning (ML) to better understand their fuel consumption patterns and improve overall profitability.

The Solution

Inawisdom and AWS have proven experience in leveraging a multitude of data/analytics services and AI and Machine Learning techniques to help leading tanker operators better understand and accurately model their fuel consumption. By analysing multiple data sets — including sensor data and weather data - Inawisdom are able to engineer a vast array of predictive features, including changes in vessel draught, shaft RPM and speed curves to accurately model expected fuel consumption for an existing or new vessel.

These intelligent insights have a variety of applications from optimising the bid price for new contracts and detecting anomalies (fraud) in fuel consumption to better compliance with emission regulations and preventive maintenance of vessels; all adding up to far-increased efficiency.

The impact of AI/ML in last-mile transformation



Journey Optimisation

Using AI and ML to predict costs and optimise vessel speed to minimise fuel, maximise market price for cargo upon arrival and minimise port costs.



Fuel Fraud Reduction

Using AI and ML to detect anomalies and identify deviations from expected fuel consumption.



Pool Income Apportionment

Using AI and ML for improved allocation of income across the pool based on more accurate models of true vessel fuel consumed vs tons/mile.



Optimised Maintenance Schedules

Using AI and ML to determine declines in vessel efficiency (drag, engine performance, etc.) and undertake maintenance when required, not just on a fixed time interval.

Accelerate your digital transformation in Shipping with Inawisdom's rapid Discovery-as-a-Service offering. We'll help you prioritise AI and ML use cases and leverage our unique Rapid Analytics and Machine Learning Platform (RAMP) to drive speed to production.

Learn more at:

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