Lloyd’s Register to use AI to advance the application of nuclear technology in maritime in collaboration with Microsoft

The partnership will develop an AI tool designed to make nuclear licensing faster, cheaper, and more predictable.

SOUTHAMPTON, UNITED KINGDOM, March 5, 2025 /EINPresswire.com/ -- Lloyd’s Register, a UK-based classification society and professional advisory service, will become one of the first maritime organisations to use generative AI for permitting capabilities built upon Microsoft Azure OpenAI Service, to bridge the gap between terrestrial and maritime applications.

Image of the projected future design of nuclear power barges, the sort of novel technology this AI capability will be used to accelerate. The images are kindly licenced for use by Lucid Catalyst.

The capabilities are designed to enhance the regulatory process for nuclear technology and will be used by Lloyd’s Register to advance the deployment of nuclear in maritime applications.

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>
> *Mark Tipping, LR’s Global Offshore Power To X Director*

Azure’s generative AI capabilities work by analysing historic nuclear licensing data and allows licensing engineers to draft new permitting documents more quickly, ready for review and refinement. It can also quickly search for regulations, precedents, and other valuable information buried in large regulatory datasets.

The technology enables a faster and more cost-effective pathway through regulation, which is essential for making nuclear a viable clean energy solution.

Mark Tipping, LR’s Global Offshore Power To X Director, who leads on nuclear technology, said:

“We have a large data source from decades of regulatory applications which these AI capabilities can interrogate swiftly to identify good practice and lessons learned.

“Together, we’re tackling one of the biggest challenges in deploying nuclear technology, which is navigating complex, slow, and costly licensing processes.”

AI has the power to break through barriers allowing to unlock the potential of nuclear across floating nuclear power, offshore, and ship power.

Tipping added: “Collaborating with Microsoft provides us with an excellent opportunity to combine two very different areas of expertise, their AI capabilities and our vast history and knowledge of maritime and nuclear safety.”

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This collaboration has been driven by Lloyd’s Register’s CTIO team. Deputy Chief Technology and Innovation Officer Jeff Scott, who played a key role in engaging with Microsoft to explore AI’s potential in maritime nuclear regulation, said: “Regulations shouldn’t be a roadblock to innovation—they should be a launchpad. By teaming up with Microsoft, we’re using AI to cut through the red tape and fast-track the future of nuclear in maritime. It’s an exciting step toward making clean energy a reality on the water.”

Darryl Willis, Microsoft CVP, Energy & Resources Industry, said: “This collaboration underscores our commitment to harnessing the power of AI to drive innovation and advance sustainability across sectors.”

“By combining our AI expertise with Lloyd’s Register's expertise in maritime and nuclear safety, we are paving the way to ease regulatory barriers and make sustainability more attainable for all industries.”

Read more about LR’s expertise in nuclear applications: Nuclear Fuel | Fuel For Thought | LR

Read more about LR’s expertise in AI and digital technology:
Beyond the Horizon | LR

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