Space Operations Risk Tool (SORT)

Department of Mathematics - Spring 2023

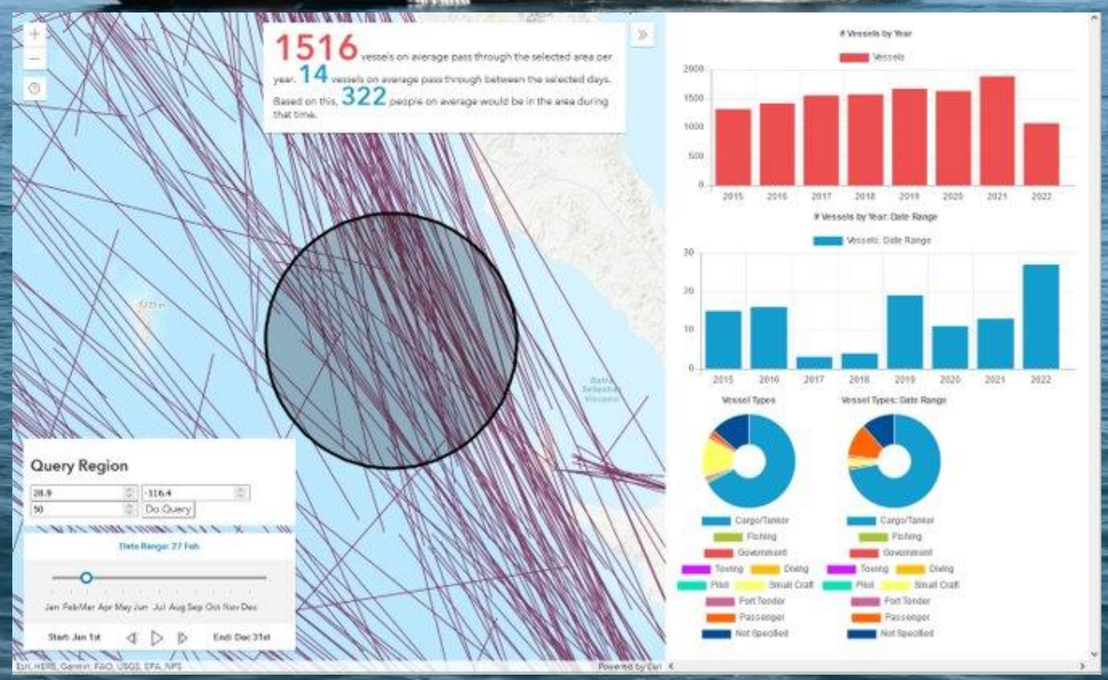
Background: The Coast Guard assists space agencies in the launch and recovery of their space assets. An analysis of vessel traffic density is needed to advise these space agencies on the safest place to conduct their space operations.

Problem Statement: Develop a tool that evaluates the risk to mariners within the vicinity of a proposed space operation in the PACAREA Area Command.

Methodology: ArcGIS was used to analyze Automatic Identification System transmissions, enabling a risk estimate based on past trends.

Final Product: A tool that allows the user to select an area and date of a proposed space operation. Metrics such as traffic density and average people on board are returned to quantify the expected risk.

Photo Credit: NASA/Josh Valcarcel



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