

## **Small ships don't shine: Classification of ocean vessels from low resolution, large swath area SAR acquisitions**

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**Abstract: Monitoring ocean vessels that are not near the coast is difficult and expensive. One way of overcoming this is through the use of SAR satellite platforms. To monitor the largest possible area would require the use of course resolution SAR images which reduce even the largest ships to several pixels. This paper covers the datasets, methods and results used to arrive at a machine learning algorithm that classifies the size of a vessel from course resolution SAR images. EW-GRDM Sentinel-1A images were used to classify ocean vessels by size.**