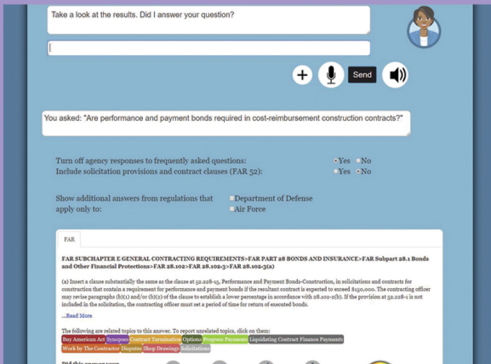


ARiA

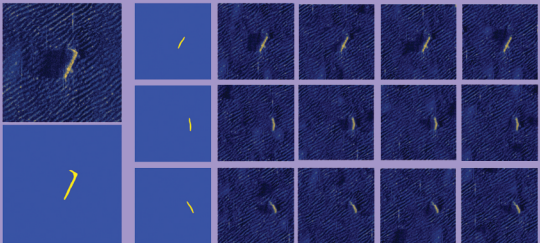
Machine Learning and Artificial Intelligence



AI for Aquisition Regulations



Deep Learning for synthesizing synthetic-aperture images



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Capabilities:

ARiA maintains broad expertise in machine learning and artificial intelligence for multiple domains—ranging from synthetic-aperture (SA) imagery to legal documents—using a variety of supervised, unsupervised, and semi-supervised techniques including statistical-learning approaches ranging from traditional algorithms to cutting-ed deep-learning techniques as well as Bayesian and formal-logic approaches.

Projects:

- Deep learning for explainable classification of SA images and synthesis of synthetic SA images
- Deep learning algorithms for predicting transmission loss (TL) from small numbers of tactical measurements made by a distributed sensor field used to predict sonar-system performance
- Synthetic ASW Generation Engine (SAGE): Combination of statistical machine learning and formal logic reasoning for generation of training scenarios that meet training goals with a constrained computational load
- Machine Interface for Contracting Assistance (MICA): natural-language question-answering system for federal acquisition regulations based on semi-supervised statistical-learning algorithms and formal logic

Customers:

- Air Force Office of Transformational Innovation (SAF/AQ)
- Air Force Research Laboratory Information Directorate (AFRL/RI)
- Naval Air Systems Command (NAVAIR)
- Naval Sea Systems Command (NAVSEA)
- Office of Naval Research (ONR)