

Applied Machine Learning

Riverside Research is a nonprofit organization advancing scientific research for the benefit of the U.S. government and in the public interest. Through our company's Open Innovation Concept, we invest in multi-disciplinary research and development and encourage collaboration to accelerate innovation, advance science, and deliver trusted solutions.

CAPABILITIES

- » Opportunity assessments and implementation plans based on detailed and thorough evaluations of organizational requirements
- » Tailored, realistic synthetic data generation, including EO, radar scattering center, and infrared domains, to supplement real-world data gaps and provide the data volumes needed for complete model training
- » Model development and prototype implementations applied to automation of labor-intensive analytical tasks, such as object detection, aircraft and satellite pose and orientation estimation, and high-frame rate image event detection
- » Implementation of models onto secure compute platforms conformant with security standards and approved software and dependency lists
- » Multi-domain ML development environment

MACHINE LEARNING APPLIED TO INTELLIGENCE ENVIRONMENTS

Application of machine learning models to intelligence problems in secure environments presents unique challenges to model development and deployment. Riverside Research addresses the machine learning integration cycle on secure platforms—from initial assessment of automation opportunities to model development, and from data labeling to model deployment.

AREAS OF EXPERTISE

- » Deep learning
- » Model optimization
- » Synthetic data generation
- » ML assessment and implementation plans
- » Secure platform model integration
- » Multiple domains: EO, IR, RF, SAR, OPIR
- » Object detection, pose estimation, RCS

