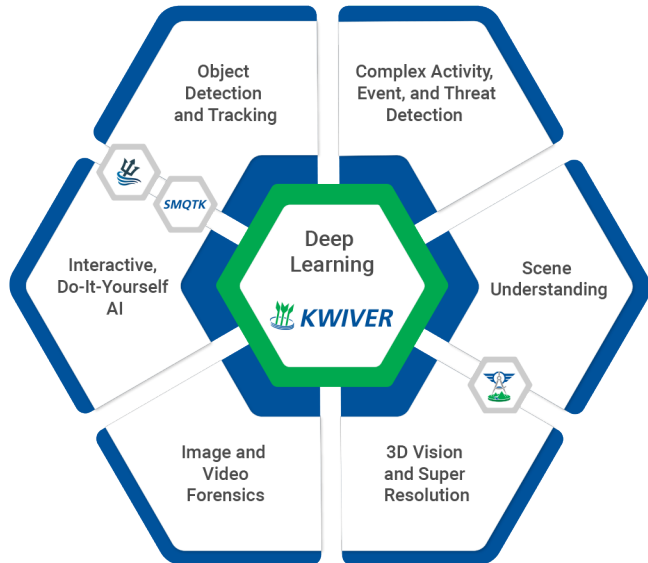


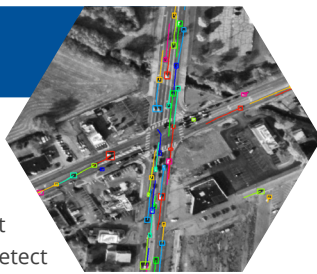
Leaders in deep learning for computer vision since 2014.



Kitware is a leader in developing and advancing state-of-the-art technologies and capabilities for automated image and video analytics. As an early adopter of deep learning, this plays an essential role in everything we do. We are dedicated to researching and creating innovative techniques and technologies valuable to the computer vision community and our customers. Kitware's computer vision and deep learning research and development incorporates multiple domains (air, ground, space, and maritime), sensors, and diverse manned and unmanned platforms.

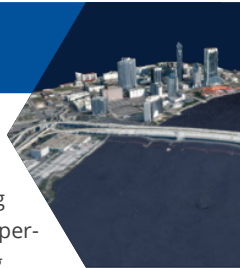
Object Detection and Tracking

Our video object detection and tracking tools address challenging conditions and scenarios. Kitware's suite of trackers is the culmination of years of continuous government investment totaling millions of dollars. They consistently detect and follow targets in congested scenes and perform real-time multi-target tracking. Our trackers also execute robust deep learning-based object detection on multiple image sources, including commercial satellite imagery, WAMI, and FMV.



3D Vision and Super Resolution

Using 3D vision, Kitware can estimate camera models, 3D point clouds, and dense 3D surfaces from multi-view imagery and video without requiring metadata or calibration information. We produce super-resolved images from single images or by combining multiple images using deep learning, semantics and geometry. Our super-resolution techniques enhance details to improve visual inspection of objects and scenes of interest, resulting in enhanced imagery and video exploitation.



Complex Activity, Event, and Threat Detection

Kitware's tools recognize high-value events, salient behaviors, complex activities, and threats through the interaction and fusion of low-level actions/events in very dense and cluttered environments. Many of these tools feature near real-time alerts on video for behavior, activities, and events of interest. They are also capable of identifying actions in massive video streams and archives using complex threat indicators.

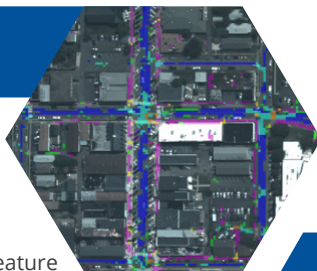


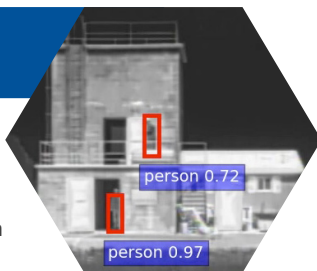
Image and Video Forensics

Kitware is continually developing and evolving our algorithms to automatically detect image and video manipulation, even in large data archives. In addition to exposing fake or altered images and video, we combine advanced computer vision and deep learning techniques to localize the area of manipulation.



Image and Video Scene Understanding

Kitware's knowledge-driven scene understanding capabilities use deep learning techniques to accurately segment scenes into a large number of object types. More than just defining objects by appearance, we also gather knowledge about the object's behavior so we can identify areas with similar behaviors. Semantic scene understanding improves downstream capabilities such as threat detection, change detection, 3D reconstruction, and more.



Interactive Artificial Intelligence and IQR

It is Kitware's goal to empower researchers, scientists, developers, and analysts to understand, build, test, and deploy novel AI solutions without AI expertise. We are actively working to explain the AI decision-making process so one can recognize when to trust and/or question the technology.



As part of these efforts, Kitware provides the ability for a user to develop and further refine object classifiers using Kitware's Interactive Query Refinement (IQR). As a mechanism to perform do-it-yourself AI, this interactive capability permits users to train custom object classifiers through positive and negative reinforcement to produce more robust deep learning models improved through explainability.

Stay connected:
kitware.com/cvpr2020
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An open source toolkit that solves challenging image and video analysis problems.



An open source toolkit for exploring large archives of image and video to find similar content based on Interactive Query Refinement (IQR).



A cross-platform application for aerial photogrammetry.



An open source do-it-yourself AI system for video and imagery analysis.