





Mission

Mayachitra, Inc. provides state-of-art image processing, video management and computer vision technologies for content-centric applications in commercial, scientific, and defense markets. Automating the information extraction, access and management from image and video archives relieves the painstaking manual effort commonly required for extracting information of value from multimedia data archives.

Vision

Mayachitra thrives to research and develop state-of-the-art image informatics technologies related to image/video processing, computer vision, and large scale data management.





Fact Sheet and Highlights

- Founders are internationally recognized experts in Computer Vision and Machine Learning with over 400 peer-reviewed publications
- Located in Santa Barbara, California, USA
- Privately held
- Zero debt
- Primarily funded by federal grants (incl. SBIRs and STTRs), that transitioned in product sales
- Awarded 20 winning contracts since 2015, totaling \$15M

Competitive advantages at Mayachitra

- Pool of highly qualified and experienced engineers
- Strong ties to UCSB, constant source of new technologies
- History of brining sophisticated technology with an intuitive interface, responsive to changing needs
- Deliver new products to market in cost effective ways with low overhead



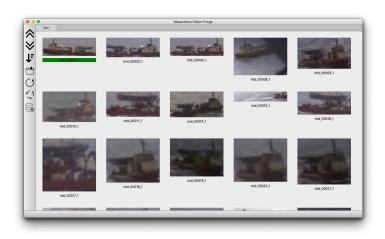
Capabilities

The company has core competencies in the areas of machine learning, computer vision, bioimage analysis, data hiding, scientific computing, and multimedia databases. Mayachitra has rapidly grown into a leader in providing deep learning data solutions and has experienced full-time engineers, most of them with advanced degrees. Our key technology areas include:

- Large scale visual & activity content-based search
- High dimensional descriptor indexing
- Automated image labeling and classification
- Advanced image and video registration
- Quantitative analysis of biological images
- Compressive sensing
- Video saliency detection
- Tracking and video activity recognition
- Image matching-based geolocalization
- Image/Video forgery detection and localization
- Malware classification



Rapid AI model building for Maritime targets



Vision Forge

- Train your own deep learning models for targets from full motion video (FMV) with a few simple clicks
- Easily share your models
- Update models with the latest data to improve search performance

Beholder

- Immediately view when targets have been identified on a video timeline
- Reap the benefits of your own machine learning models
- Filter what is displayed to view only what you need to see

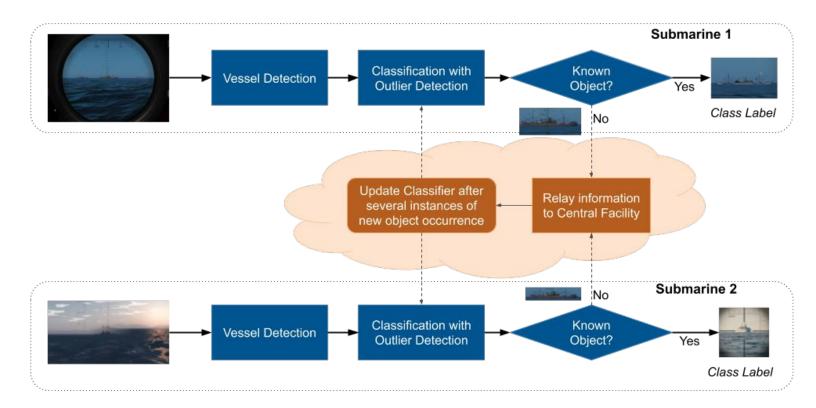


FEATURES

- ✓ Automatically process 1000's of hours of data with little to no human interaction
- ✓ Interoperable with airborne-collected FMV/imagery and satellite imagery
- ✓ Handles Electro-Optical (EO) and Infra-Red (IR) sensor modalities



Periscope video analysis and Knowledge fusion



CARPOOL

- Continual le<u>Arning foR PeriscOpe videO</u> ana<u>Lysis</u>
- Employs state-of-art deep learning based-methods to effectively detect and recognize objects in periscope imagery
- Collaboratively combine the "knowledge" learned from other such systems in the fleet using continual learning

FFATURES

- ✓ Timely learn and track objects of interest in complex data sets
- Unique graphical user interface (GUI) architecture that supports ingesting data, updating and transmitting models efficiently
- ✓ Novel architecture for sharing and consolidating learned information across the fleet



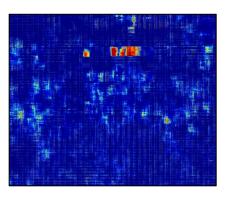
Forensic analysis of digital media







Tampered Image



Our Detection Algorithm

MC Forensic Kit

Machine learning based models to detect image manipulations including

- Splicing
- Inpainting
- Seam Carving
- Deep Fakes



Fake media does not look fake at first glance

FEATURES

- ✓ Provide image/video forensic tools customized to your application
- ✓ Continuous update to enhance forensic performance and user experience

Web applications in our MC Forensic Kit

- medifor-webaρρ-mayachitra.azurewebsites.net
- gan-detector-mayachitra.azurewebsites.net
- mayachitra-thislocationdoesnotexist.azurewebsites.net

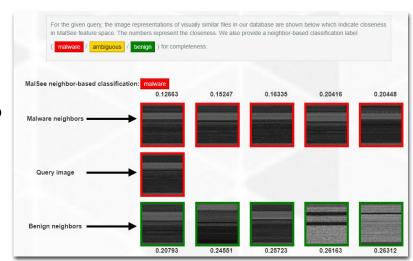


Al-based reasoning for Malware detection



MalSee

- Employs novel machine learning and computer vision based multi-tiered strategy to thwart cyber-attacks
- Platform (Windows, MacOS, Android, iOS) agnostic
- Security against known and zero-day attacks



FEATURES

- ✓ Enables learning new viruses and generates explainable malware classification reports
- ✓ Identify malicious intent of zero-day threat from learned behavior
- ✓ Small code footprint which can be deployed on any OS
- ✓ Cloud deployable REST API-based web application
- ✓ Good malware detection rate which is comparable to that of other Antivirus solutions
- ✓ Community and Enterprise editions





Services & Expertise













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