UTOPIACOMPRESSION

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Integrative AI Solutions For Today & The Future

UtopiaCompression empowers mission success by delivering advanced capabilities that elevate situational awareness, accelerate decision-making, and strengthen operational effectiveness across defense and commercial domains.

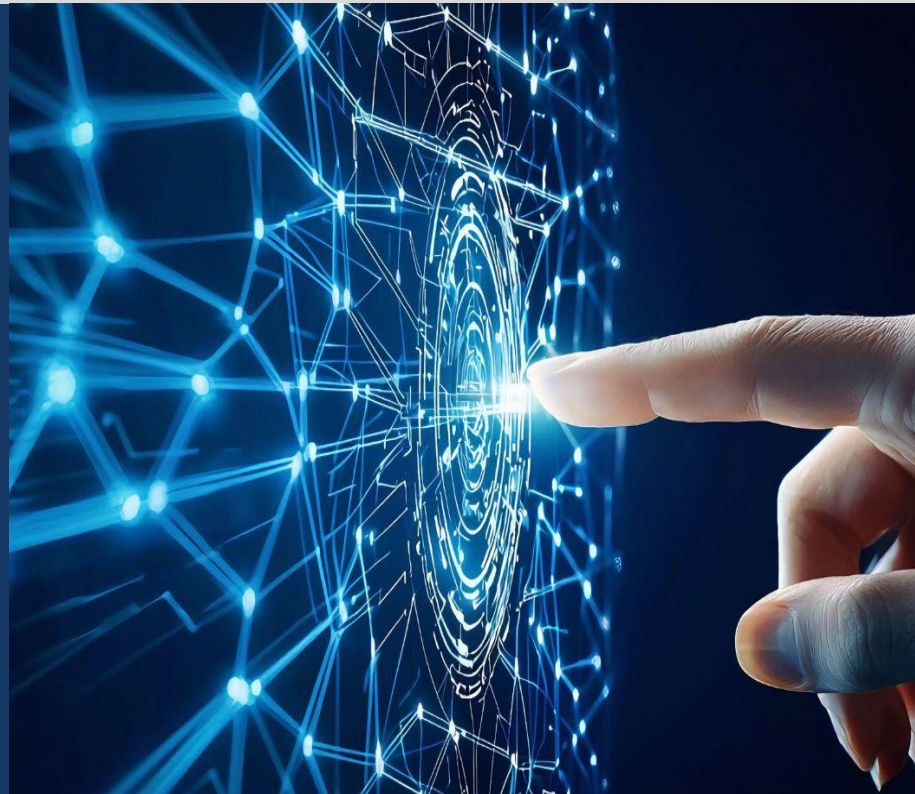
AREAS OF TECHNOLOGICAL DEVELOPMENT

- **Visual Analytics**
- **Autonomous Systems**
- **Learning Analytics**

Recently Awarded two **Navy SBIR Phase III** *integration efforts*

Awaiting Authority to Operate (ATO) approval for full deployment.

U.S. AIR FORCE



VISUAL ANALYTICS

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SeeSharp

360° panoramic camera to detect, track, and classify objects on the surface of water in EO/IR domains.

KEY FEATURES

- Vessel detection
- Real time monitoring
- Track fusion capability
- Onboard sensor integration
- Track custody maintenance
- Multi-spectrum classification

AVIAN: Airborne Visual Analytics

Flight-tested with U.S. Air Force assets for real-time target detection and tracking in contested environments, AVIAN provides automated situational awareness to support critical ISR and combat search and rescue missions with minimal operator burden.

KEY FEATURES

- High altitude sensing
- Multi object tracking
- Seamless detection & tracking objects over land & water
- Sensor agnostic, can operate with commercial off the shelf sensors
- Lower altitude face detection and identification

Learn more about SeeSharp on our YouTube Channel

Learn more about AVIAN on our YouTube Channel

AUTONOMOUS SYSTEMS

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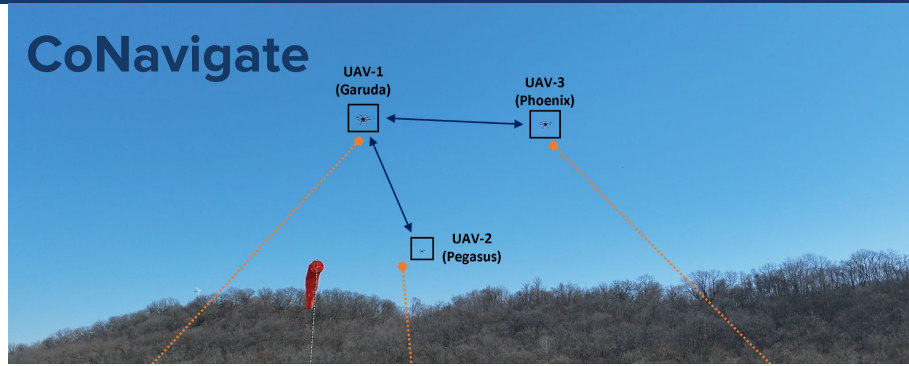
AETHER: Detect & Avoid

A completely passive Detect and Avoid system, AETHER enables Beyond Visual Line-of-Sight (BVLOS) operations for autonomous aerial vehicles.
A safe and efficient structure for aerial platforms deployed under the Advanced Air Mobility (AAM).

KEY FEATURES

- Long distance sensing
- Multi-object tracking
- Aerial object classification with AI safety measures
- Passive range using monocular camera(s)
- Sensor-agnostic operates with low-cost off the shelf products
- No ownership maneuver to acquire range to the target

CoNavigate



Solving one of the biggest challenges of Advanced Air Mobility (AAM): last mile delivery with aerial vehicles. For congested areas with no GPS, UC's **GeoPulse** uses "smart landmarks" to allow these vehicles to develop navigation senses like humans.

KEY FEATURES

- Applicable to various vehicles types, single or multi-vehicle framework
- Landmark based navigation ensures "GPS-like" accuracy
- Sensor-agnostic, operates with low-cost off the shelf products

AUTONOMOUS SYSTEMS

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CO AIR

Mixed-domain systems present challenges for Alternate Position, Navigation, and Timing (Alt-PNT) in GPS-denied Environments. CO AIR enables coordinated air and ground operations through trajectory prediction, intent estimation, and threat recognition.


CO AIR Custom Multi-Camera System

KEY FEATURES

- UAVs & UGVs collaborate without GPS
- Trajectory prediction of vehicles in case of occlusions
- Action and intent classification enables rapid threat detection and situational awareness
- Utilizes local and passive sensors for operation
- Platform agnostic integration

Enables UAV swarms to operate and navigate in tandem in GPS-Denied conditions, deployed on Group I - V UAVs, across military and civilian domains.

KEY FEATURES

- Passive solution for intruder range estimation
- Follows, classifies, and maintains custody of intruder aircraft at all times
- Scalable to multiple UAVs and compatible with any platform
- Accurate and efficient target information handoff

LEARNING ANALYTICS

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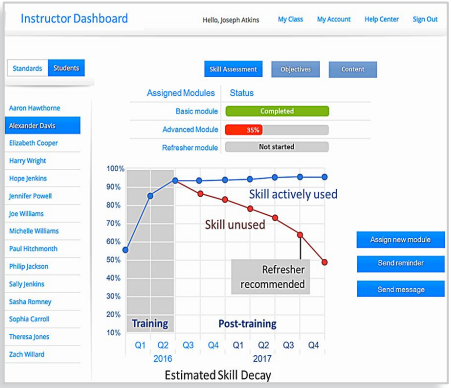
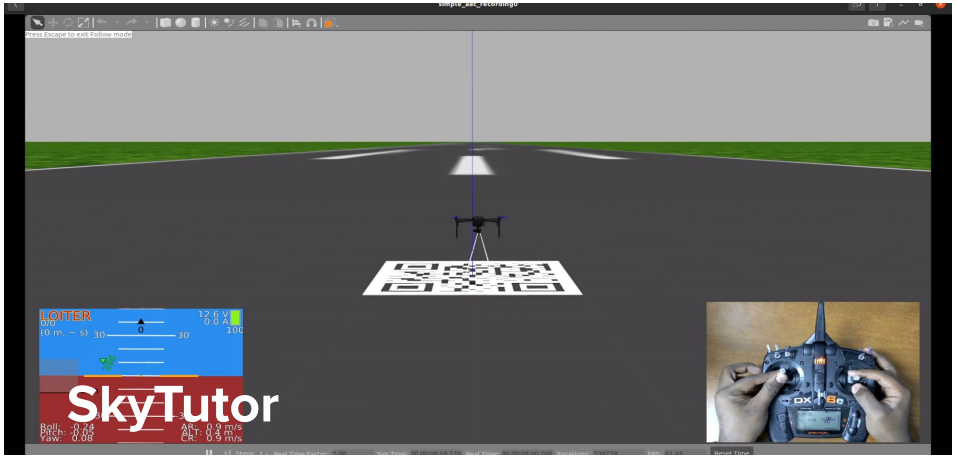
CHIRONALYTICS: Elevating Training Effectiveness



KEY FEATURES

- Lightweight & xAPI-compatible
- Integrates with an LMS, as a widget, content authoring tool, or standalone
- Assesses skill mastery across courses & platforms
- Smart AI modeling adapts over time without requiring massive datasets
- Improves remediation & skill retention (6+ months post-training)
- Validated across Navy & AF training, including VR maintenance and digital pilot training



SkyTutor empowers operators to navigate a variety of drones, redefining training. It offers a feedback-driven learning curriculum, to enhance Unmanned Aerial Vehicle (UAV) pilots' operational skills. Operators can seamlessly integrate and deploy products, such as AETHER, enhancing the UAVs capabilities.

See Chironalytics in action on our YouTube Channel

AUTONOMOUS SYSTEMS

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PACER-Geolocate

An autonomous software on-board UAVs to geolocate dismounted soldiers sending out distress signal in a contested environment. The software is primarily designed for search and rescue application in an agile combat environment. Once personnel is located, UAV provides overwatch till additional reinforcements arrive.

PACER-Geolocate leverages CurveSYS sensor mesh (PACER-Sensing) as the analog trigger for distress detection and localization. The sensor mesh is embedded on a military helmet and has demarcated emergency zones for dismounted soldier to send a ‘1x’ TAP signal indicating distress.

KEY FEATURES

- Performs in GPS-degraded environment
- Compliant with TAK system
- Accuracy = 90-95% within 20 seconds;
- AI-based visual analytics software from on-board sUAS EO camera images.