

From Passive Monitoring to Proactive Intelligence

An Introduction to SARAHA1 by Tensor Networks



The Data Deluge is Blinding Us

Critical infrastructure sectors—including State & Local Government (SLED), Utilities, and Telecommunications—face increasing threats and inefficiencies because human operators **cannot scale to process** the volume of modern surveillance data.



Outdated Monitoring

Lacking real-time insights and automated anomaly detection.



High Operational Costs

Driven by inefficient incident response and manual, resource-intensive processes.



Critical Missed Events

The sheer volume of simultaneous video streams makes it impossible for humans to effectively monitor and prevent incidents before they escalate.



The Paradigm Shift: Introducing SARAHA

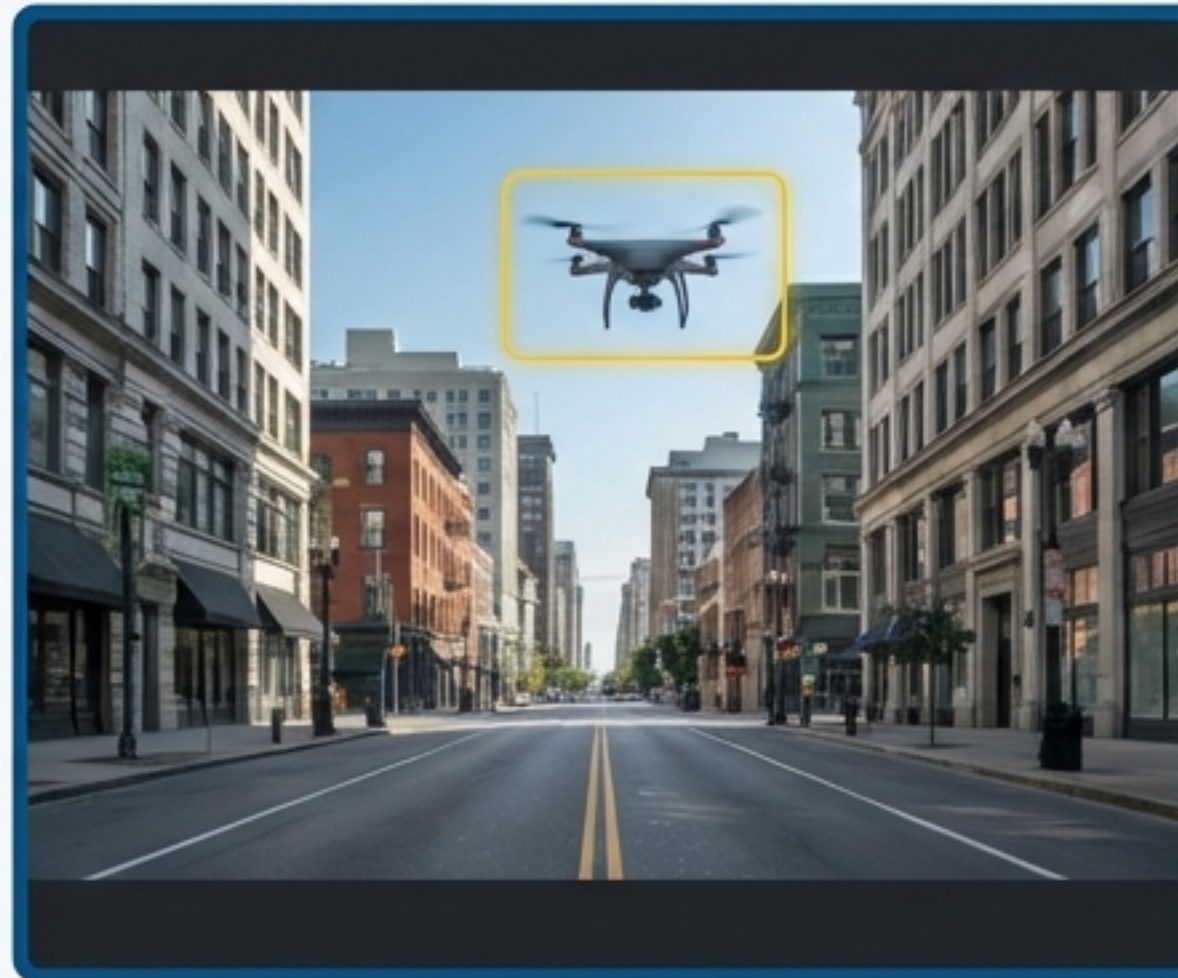
SARAHA seamlessly transforms ordinary surveillance systems into AI-powered, intelligent security networks. It moves beyond simple analytics to provide predictive insights, identifying issues before crises arise.

Situational Awareness Response And Help AI

Key Capabilities:

- Real-time object detection and anomaly recognition.
- Deep learning models applied across multiple camera feeds.
- Turns 'dumb' cameras into active, intelligent sensors.

SARAHA



ALERT

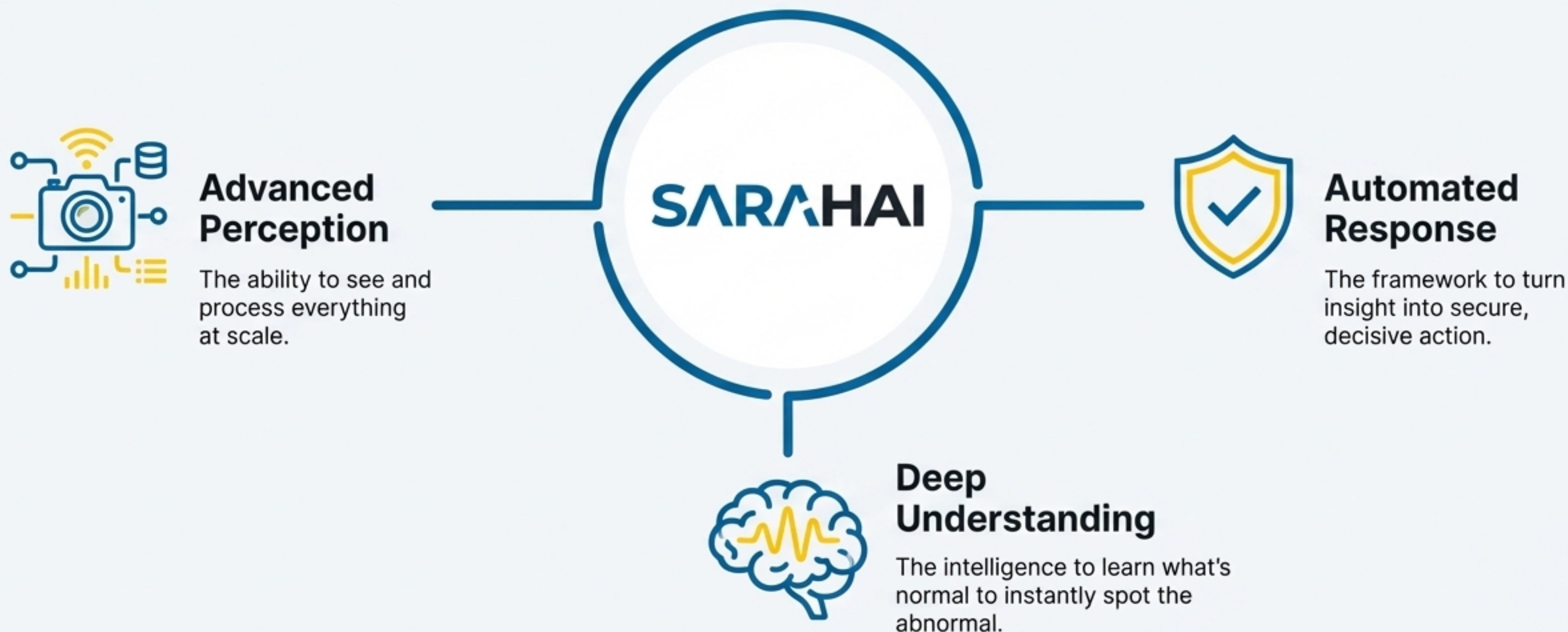
ANOMALY DETECTED:
Unidentified Aerial Vehicle

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[View Details](#)

Under the Hood: The Three Pillars of SARAHAI

SARAHAI's power is built on a foundation of three integrated technological pillars that work in concert to deliver unparalleled situational awareness.





I. Multi-Stream, GPU-Accelerated Perception

SARAHAI is engineered to ingest and analyze vast amounts of visual data in real time, forming the foundation for all higher-level intelligence.

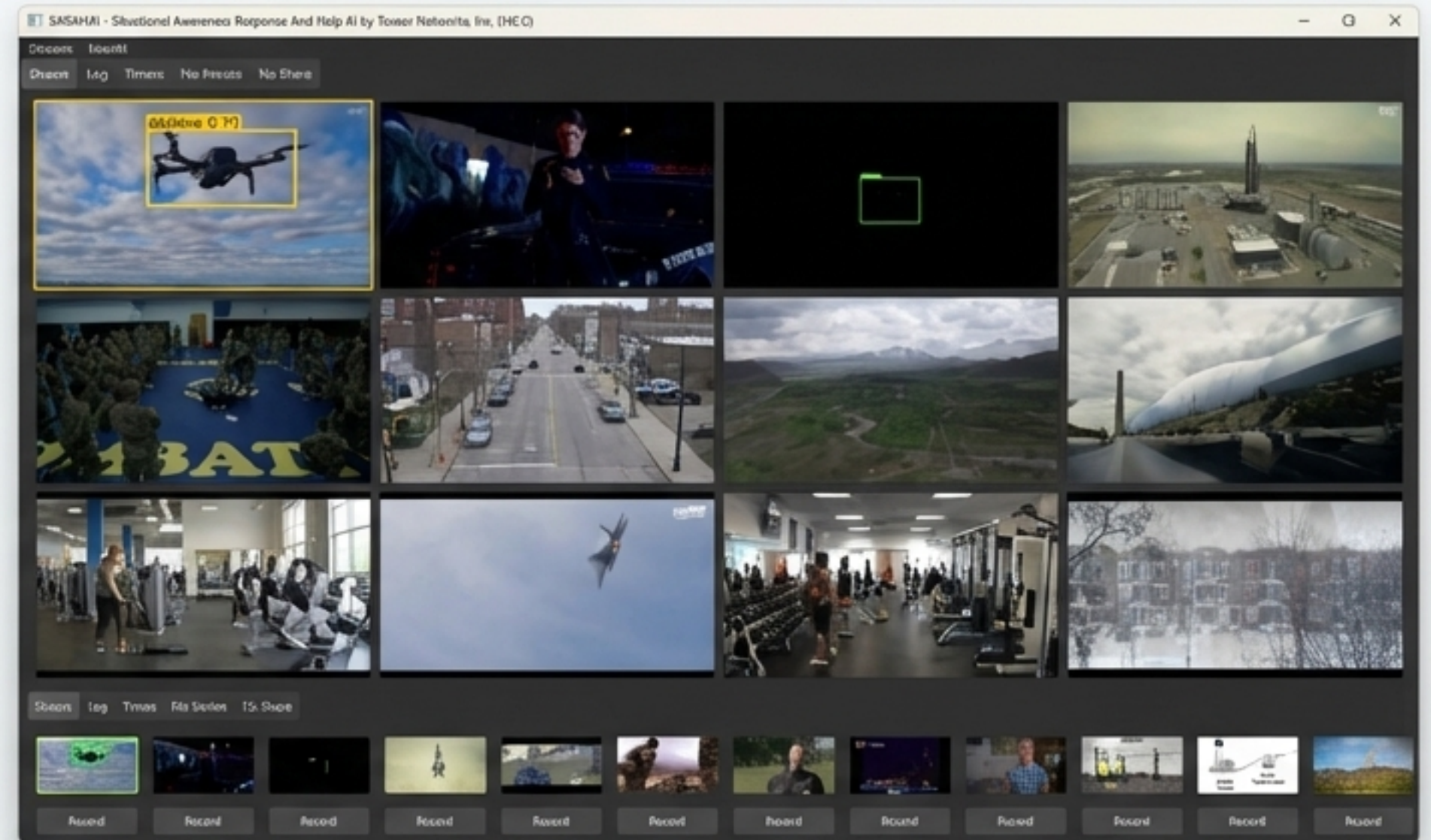
Key Technical Specifications:

Massive Scale: Processes up to **24 simultaneous video streams** per instance.

Advanced AI Detection: Utilizes the **YOLOv8** model for high-accuracy object detection and classification.

Hardware Accelerated: Natively optimized for **NVIDIA CUDA, AMD ROCm, and DirectML** environments for maximum performance.

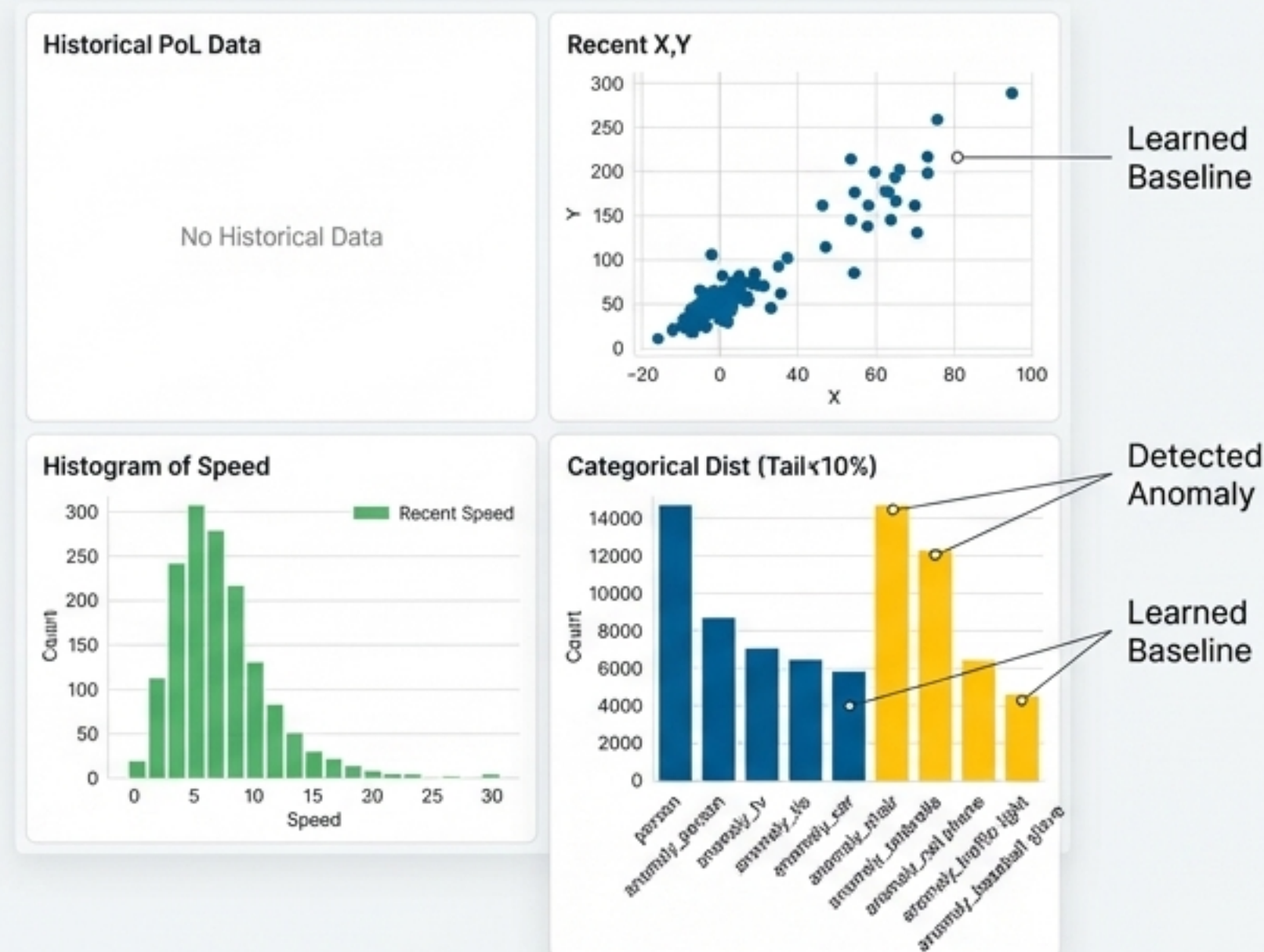
Flexible Ingestion: Supports a wide range of sources including USB, RTSP, ONVIF, and local video files.



II. The Core Intelligence: Pattern-of-Life Analytics

This is more than just object detection. SARAHAI learns the unique rhythm and flow of your environment—the normal patterns of people, vehicles, and activity over time—to detect subtle deviations that signal a potential threat.

- * **Pattern-of-Life (PoL)** analysis based on **Kernel Density Estimation (KDE)** models behavioral baselines.
- * Anomalies are flagged when activity deviates from the learned norm, enabling detection of precursor events.
- * Moves beyond basic analytics to deliver **genuine predictive insights**.



III. From Insight to Secure, Automated Action

Intelligence is only valuable if it drives a timely and effective response. SARAHA1 is built with a security-first architecture to ensure insights are delivered and evidence is handled with operational integrity.

- **Automated Alerting:** Instant notifications via **Twilio SMS** and **SMTP Email** for critical events (e.g., gun, knife, drone detection).
- **Encrypted Recording:** All video evidence is captured and encrypted using **AES-GCM 256-bit encryption**, ensuring chain of custody.
- **Federated Intelligence:** Securely shares metadata between sites using a **Common Operating Picture (COP) Fusion** module, with all communication protected by **Ed25519 signatures**. No raw video is transmitted between nodes.



A Force Multiplier for Your Operations

Demonstrable ROI and a new standard of efficiency.



Up to 50%

Reduction in False Alarms

Freeing up operator time and resources by focusing only on credible threats.



An Estimated

30%

Acceleration in Real-Time Incident Response

Enabling faster intervention and mitigating risk more effectively.

Primary Business Benefits

- Drives measurable cost savings.
- Reduces resource-intensive interventions.
- Enhances overall security posture and asset protection.

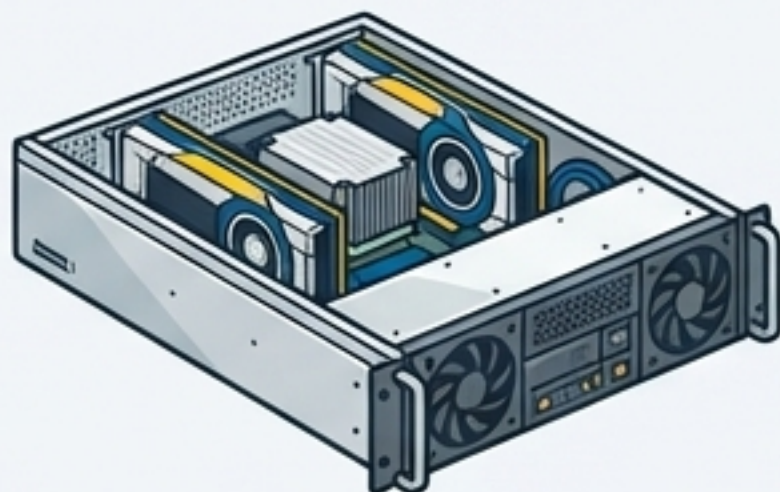
Engineered for a New Class of Threats



SARAHAI sets itself apart from closed, single-vendor platforms like Verkada and Axxis by delivering next-generation security insights they cannot match.

Feature	SARAHAI	Typical Competitors (e.g., Verkada, Axxis)
Core Analytics	✓ Advanced Pattern-of-Life (PoL)	Basic Motion/Object Detection
System Architecture	✓ Open System Integration (Works with existing DVRs/cameras)	Closed, Proprietary Ecosystem
Performance	✓ GPU-Accelerated (CUDA/ROCm)	Often CPU-only or cloud-dependent
Intelligence Sharing	✓ Secure Federated Awareness	Siloed, Single-Site Views

Intelligence Where You Need It: Flexible & Scalable Deployment



Model 1: Standalone On-Premise

- **Description:** Ideal for securing specific facilities or integrating with existing infrastructure.
- **Hardware:** Runs on a local **GPU Workstation**.
- **Integration:** Works with existing DVR and camera systems.
- **Scale:** Up to **24 streams** per instance.



Model 2: Hosted GPU Cloud

- **Description:** Designed for large-scale, distributed security networks and data-driven decision making.
- **Hardware:** Deployed on **GPU Servers (IaaS)**.
- **Integration:** Works with Cloud DVR solutions.
- **Scale:** **Massive, elastic scale**.

A Legacy of Innovation and Trust

Proven, Patented, and Mission-Tested.

Key Credibility Points



Founded in 2019: A timeline of continuous innovation.



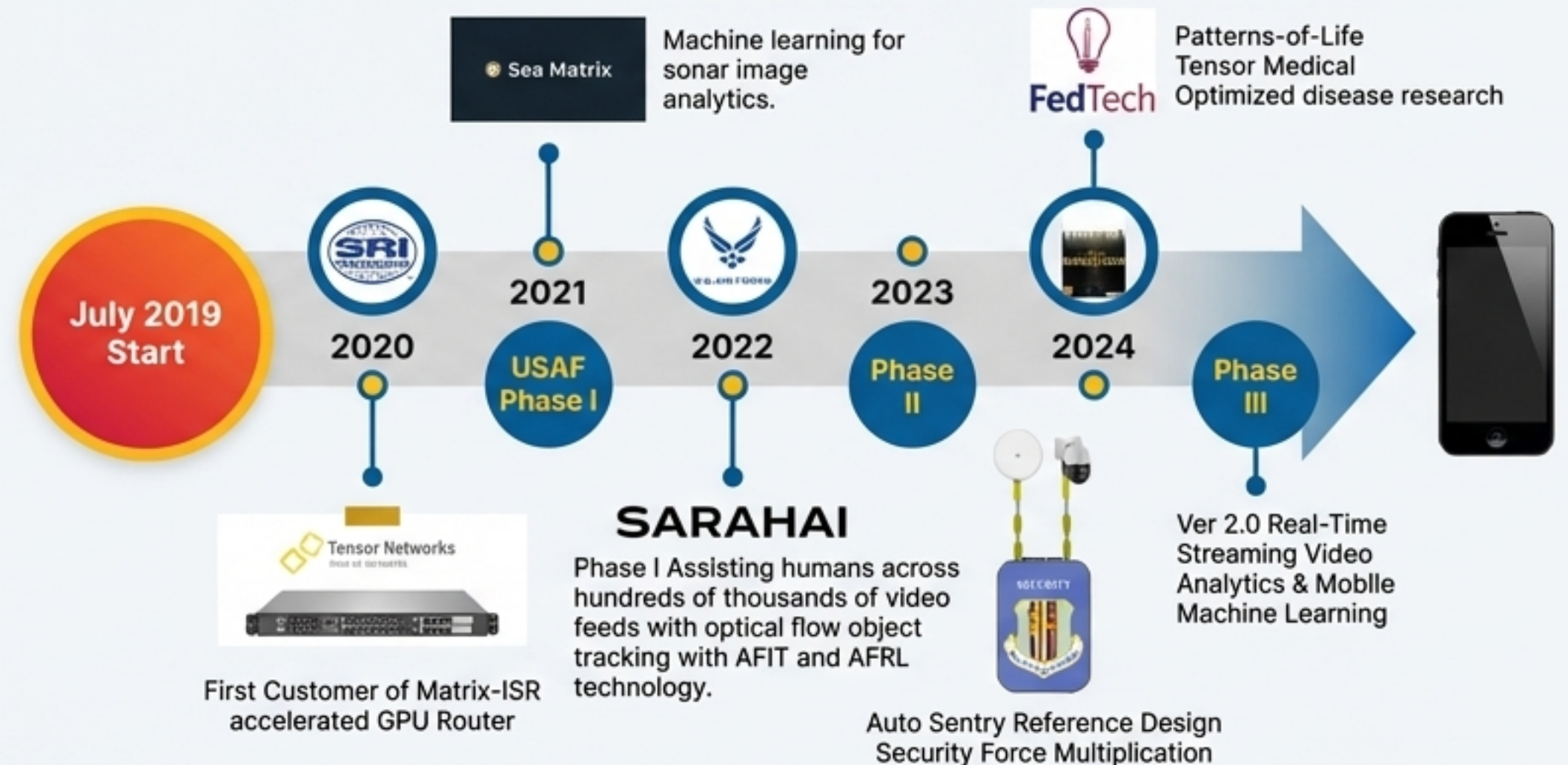
U.S. Government Partner: Successfully delivered on **USAF Phase I and Phase II projects**, including the AutoSentry Reference Design.



Patented Technology: Core IP is exclusively licensed and protected by **U.S. Patents 9,696,404 & 11,308,384 B1**.



Made in the USA.



SARAHAI integrates sensors (Network, SONAR, and Video) into a human assistance solution as the world's leading AIoT Platform

The Future of Safety and Operational Intelligence

Multi-Billion Dollar Market Potential



SLED

\$30B+ annual spend (\$1.5B–\$3B potential for SARAHA).



Utilities

\$10B–\$15B in critical infrastructure security (\$0.5B–\$1.2B potential).



Telecom

\$5B–\$10B in network security & resilience (\$0.15B–\$0.5B opportunity).

Total Addressable Market: \$2.15B–\$4.7B annually

The Investment Opportunity

A \$10M investment will accelerate market entry, expand licensing opportunities, and establish SARAHA as a leader in AI-powered safety.

Call to Action

[**Schedule a Technical Deep Dive**](#)[**Request a Pilot Program**](#)

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