

Safer, Smarter Campuses

AI-Enabled Computer Vision

Overview

ProHawk AI revolutionizes campus security by restoring clarity to low-light, degraded, or obstructed video in real-time. Using patented AI-Enabled Computer Vision restoration powered by NVIDIA® GPU accelerated computing with CUDA® parallel processing restoring each pixel, it turns failing security footage into actionable video streams. Security teams gain earlier threat detection, faster response, and clearer insights—without replacing existing cameras.

Ideal for monitoring entrances, dorms, parking areas, and event spaces, ProHawk AI integrates easily with video management systems (VMS) and supports sub-3 millisecond latency for real-time awareness, empowering schools and universities to modernize security, reduce risk, and protect their communities more effectively.

Key Challenges

Poor Video Quality in Critical Moments

Many campuses rely on legacy video systems that struggle in low-light, weather-obstructed, or high-motion scenarios—exactly when visual clarity is most needed for detecting and responding to threats.

Delayed or Incomplete Incident Reponse

Security teams often lack real-time visibility into developing situations due to camera blind spots, poor image quality, or latency, making it harder to identify incidents quickly and act decisively.

Scalability and Integration Limitations

As campuses expand and threats evolve, institutions face difficulty scaling security infrastructure or integrating modern tools with older VMS's, leading to fragmented and inefficient operations.

Limited Value of Archived Footage

Archived video often lacks the clarity needed to identify actions, or objects—reducing its usefulness for disciplinary actions or compliance reporting.

Key Benefits and Outcomes

ProHawk AI significantly boosts campus security by transforming low-quality video into clear, actionable footage in real-time. It enables earlier threat detection, faster incident response, and stronger investigative outcomes without requiring hardware replacement. Easy integration with existing VMS platforms supports proactive, scalable safety operations across campus environments. The result is a smarter, more responsive security posture that protects students, staff, and property more effectively.

• Real-Time Video Clarity

Instantly restores clarity in low-light, obstructed, or degraded video to support rapid decision-making in dynamic situations.

• Faster Threat Detection and Response

Enables security teams to identify and act on potential threats earlier, reducing risk and improving campus safety outcomes.

• Proof of Facts

Delivers sharper, more detailed footage for post-incident reviews, supporting accurate disciplinary follow-up.

• Seamless Infrastructure Integration

Works with current camera systems and VMS's, extending the value of installed equipment without costly upgrades.

• Scalable and Future Ready

Supports multi-camera environments making it ideal for growing and evolving campus security needs.

Accelerated Clarity for Safer, Smarter Campuses

ProHawk AI leverages NVIDIA GPU accelerated computing to deliver real-time, pixel-level video restoration for security footage. By improving existing camera performance, it boosts the accuracy of any NVIDIA DeepStream-supported model for threat detection, incident analysis, and situational awareness. As a pipeline platform, it integrates with VMS and campus security systems to provide ultra-low latency clarity—enabling faster detection, sharper decisions, and stronger campus safety without costly upgrades.



Integrated with the NVIDIA Metropolis Vision AI stack, ProHawk AI restores degraded or low-quality campus security video streams in real time—delivering uncompromising clarity for precise identification, rapid incident response, and accurate event reconstruction. Seamlessly connecting with leading Video Management Systems and security analytics platforms, it turns compromised footage into actionable intelligence that strengthens perimeter protection, enhances access control, and streamlines emergency coordination. Proven in real-world deployments and benchmark testing, ProHawk AI achieves up to 30× faster restoration, 3–4× improved clarity in the most challenging conditions, and sub-3ms latency—enabling high-throughput, real-time detection, tracking, and post-incident review at scale.

Applications	Use Case
Perimeter Intrusion Detection	Restores clarity for low-light or weather-compromised cameras, improving intrusion detection accuracy.
Access Control Monitoring	Enhances facial recognition and badge verification accuracy at entrances, gates, checkpoints.
Incident Reconstruction	Restores archived footage for clearer identification, plate reading, and event tracing.
Crowd Management & Event Safety	Improves crowd monitoring and anomaly detection for proactive safety interventions.
Vehicle & Parking Lot Security	Boosts license plate recognition and tracking in glare, shadows, or weather.

Feature	Requirement
Compatible NVIDIA Hardware	NVIDIA RTX™ Pro – Blackwell, Ada Lovelace, Ampere
Supported Input Formats	Image & Video Files, RTSP Camera Stream
Supported Operating Systems	Microsoft Windows 10/11 (64-bit)

ProHawk AI's patented AI-enabled computer vision restoration technology sets a new standard for campus security. Accelerated by NVIDIA Jetson™ at the edge and scaling up to data center-class NVIDIA GPUs, it transforms low-quality monitoring feeds, challenging lighting, or high-motion environments into clear, actionable video—empowering faster response, stronger investigations, and a safer campus built for the future.

