ProHawk Vision Server
Scalable AI-Enabled Computer Vision

Overview

ProHawk Vision Server delivers advanced AI-Enabled Computer Vision restoration built on NVIDIA® Metropolis to overcome visibility challenges in AI-driven video applications. It operates as a DeepStream plugin and a Metropolis Microservices Container, ensuring scalability, fault tolerance, and high-performance processing multiple video streams. By integrating with the Metropolis Video Storage Toolkit (VST), ProHawk Vision Server enables seamless video data management, boosting AI and analytics applications across industries.

ProHawk AI delivers real-time, pixel-by-pixel computer vision restoration, ensuring clear visibility at the critical moment in time in *all* environmental conditions. By integrating with existing Video Management Systems (VMS), and AI-driven analytics, ProHawk AI boosts operational workflow efficiency, and supports better decision-making by revealing actionable insights.

Core Components

ProHawk Vision Server v7
Built on the NVIDIA Metropolis vision AI stack, it delivers real-time clarity restoration, enabling AI models to perform accurately in challenging conditions like rain, fog, glare, and low light. Optimized for edge, on-premises, and cloud, it leverages containerized microservices for scalability and fault tolerance, ensuring high-fidelity video streams that improve object detection, tracking, and AI analytics.

ProHawk Vision Microservices Container
Scales dynamically to meet processing demands, ensuring uninterrupted AI performance with automatic failover. Industry-standard interfaces enable seamless integration into existing video AI workflows.

ProHawk Vision Plugin
Optimized for real-time, low-latency inference on NVIDIA GPUs, including Jetson™. Efficiently processes multiple video streams simultaneously and is deployable on edge devices, data centers, and cloud infrastructures.

Key Benefits and Outcomes

ProHawk AI improves industry applications by restoring visibility in all challenging condition, improving AI-driven detection accuracy and user clarity. Seamlessly integrating with existing security and VMS's, it optimizes automated monitoring and workflows, reducing manual review time while strengthening real-time detection. As a critical AI enabler, ProHawk AI transforms raw video data into actionable intelligence, ensuring safer, more efficient, and higher-performing operations across industries.

- **Improved Visibility in Any Condition**
  Enables personnel & AI-driven analytics to operate effectively in low-light, poor weather, and challenging environments.
- **Increased Detection Accuracy**
  Improves the visibility and effectiveness of operators, AI detection and analytics.
- **Seamless Integration**
  ProHawk Vision Plugin integrates seamlessly with NVIDIA DeepStream, the NVIDIA Metropolis Microservices Container wraps DeepStream Pipelines with industry-standard interfaces, and ProHawk Vision Server integrates the Video Storage Toolkit.
- **Deployable Anywhere**
  Runs on GPU-accelerated servers, cloud instances or edge appliances.
- **Enhanced Security**
  Strengthens monitoring capabilities by providing clearer, real-time intelligence.

Optimizing Videos and Images Clearly with NVIDIA Accelerated Computing

ProHawk AI's patented algorithms leverage NVIDIA® GPU parallel processing capabilities and accelerated computing to deliver real-time, pixel-by-pixel AI-Enabled Computer Vision restoration across the entire IT landscape, from edge to cloud. ProHawk AI's advanced restoration technology, combined with NVIDIA's accelerated computing CUDA® platform & NVIDIA Metropolis vision AI stack, optimizes throughput and responsiveness, allowing businesses to deploy AI-powered vision solutions with ultra-low latency for unparalleled clarity and actionable insights, ensuring better safety outcomes and operational efficiency.

Click to view the video

As a **Dell Validated Design Solution** and part of the **Dell AI Factory with NVIDIA**, ProHawk AI optimizes industry applications by restoring visibility in *any* condition, improving detection accuracy, and seamless integration with existing security systems. As a critical part of the workflow, it transforms raw data into actionable insights, ensuring safer, more secure operations. Validated through deployments and benchmark testing on standard GPU accelerated systems, ProHawk AI has demonstrated robust performance improvements in both the NVIDIA Metropolis Lab and Dell Validation Lab achieving **over 300% improvement** in object detection and tracking, **30X faster** video stream restoration, **3-4X better clarity** for degraded images, and **sub-3 millisecond latency**, it delivers unmatched performance for real-time AI-driven vision applications.

Industry	Application
Safety & Security	Real-Time Security Monitoring Low-Light & Obscured Footage
Smart Cities	Traffic Management Crowd Management
Transportation	Platform Safety Autonomous Vehicles
Retail	Store Analytics & Security Pilferage
Energy	Site Security & Perimeter Protection Grid Monitoring & Maintenance
Public Sector	Critical Infrastructure Protection
Manufacturing	Quality Control & Inspections Worker Safety & Compliance
Healthcare	Surgical Visualizatoin Medical Imaging Diagnostics

Feature	Description
Processing Engine	ProHawk Vision Plugin
Scalability	ProHawk Vision Microservices Container
AI Integration	Works with Any AI Model for Object Detection & Tracking
Deployment Options	Edge, On-Premise, Cloud
Compatible NVIDIA Hardware	NVIDIA® Jetson Orin™, Workstation & Data Center GPUs
Supported Video Formats	H.264, H.265, RTSP, RTP, RTMP, ONVIF
Supported Operating Systems	Ubuntu 18.04, 20.04, & 22.04 LTS

www.ProHawk.ai

ProHawk AI
255 Primera Blvd., Suite #160
Lake Mary, FL 32746
(800) 902-6972