SOLUTION BRIEF

Transform Document & Records Imaging

AI-Enabled Computer Vision

Overview

In today's data-driven world, organizations are increasingly burdened by the need to manage large volumes of documents and records with speed, accuracy, and compliance. Traditional imaging and archiving solutions struggle with poor-quality scans, rotated or skewed images, and non-searchable content, hindering effective retrieval and downstream processing.

ProHawk AI revolutionizes document and records management by combining AI-enabled computer vision restoration with intelligent document optimization—powered by NVIDIA® GPU accelerated computing and CUDA® pixel-by-pixel parallel processing. It restores, organizes, and transforms even the most degraded or complex records into high-quality, fully searchable digital assets, ensuring every document is accurate, accessible, and future-ready for modern workflows.

Key Challenges

Poor Scanned Document Quality from Legacy Sources
Many organizations still rely on scanned paper records or degraded digital images that suffer from blur, skew, shadows, or poor contrast. These low-quality documents hinder readability, slow down workflows, and can't be reliably processed by automation or OCR tools.

Inconsistent Manual Correction is Time-Consuming
Correcting skewed, rotated, or cropped documents manually is labor-intensive and introduces inconsistencies. This slows document ingestion, increases labor costs, and results in a backlog of records that are incomplete or inaccurately indexed.

Lack of Searchability Limits Document Value
Without reliable OCR or intelligent character recognition (ICR), documents remain static image files—impossible to search, categorize, or audit efficiently. This leads to compliance risks, lost productivity, and missed opportunities to automate downstream processes. ProHawk AI's restoration imrpoves clarity and structure, enabling accurate OCR/ICR and reliable data extraction.

Key Benefits and Outcomes

ProHawk AI delivers powerful business benefits by restoring degraded scans, automating document correction, and generating fully searchable files. Organizations gain higher-quality digital archives, faster, more accurate information retrieval, and significant cost savings by eliminating manual processing. With built-in compliance support and workflow acceleration, ProHawk AI transforms static records into usable, intelligent assets streamlines compliant operational efficiency.

- **Higher Quality Archives**
  Restore the quality and usability of historical and newly scanned documents without time-consuming manual intervention.
- **Improved Search and Retrieval**
  Transform image-based records into searchable, indexed assets that compatible with document and enterprise content management or records retention systems.
- **Reduced Costs**
  Eliminate the need for costly rescans, manual data entry, and error-prone manual corrections.
- **Regulatory Compliance**
  Support legal, healthcare, government, and corporate compliance initiatives with high-quality, searchable, and audit-ready document archives.
- **Faster Processing and Automation**
  Speeds up document-centric processes like onboarding, discovery, and case handling.

Optimizing Images Clearly with NVIDIA Accelerated Computing

ProHawk AI's patented algorithms use NVIDIA GPU acceleration to deliver real-time, pixel-by-pixel restoration for digitized documents and records. By improving source quality, it boosts the accuracy of any NVIDIA DeepStream-supported model for classification, text extraction, and verification. As a pipeline platform, it integrates with document management systems, archives, and edge devices to increase throughput, improve efficiency, and ensure every record is clear, searchable, and workflow-ready—without costly upgrades.

OCR	Original	ProHawk	Difference
Word Count	149	3,481	3,332
Confidence	59%	65%	+6%

As a **Dell Validated Design Solution** and part of the **Dell AI Factory with NVIDIA**, ProHawk AI optimizes digitized document and records by restoring degraded images, enabling accurate data extraction, and seamless integration with Document Management Systems and Enterprise Content Management systems. As a core part of the digital workflow, it transforms static images into actionable searchable assets—improving access, compliance, and operational efficiency. Validated through deployments and benchmark testing on GPU-accelerated systems, ProHawk AI has demonstrated significant performance gains in the NVIDIA Metropolis Lab and Dell Validation Lab. For document and records workflows, it delivers up to 30× faster image restoration, 3–4× improved clarity on degraded scans, and sub-3 millisecond latency—enabling real-time, high-throughput processing for OCR, ICR, indexing, and digital archiving at scale.

Applications	Use Case
Financial Services	Processing banking records, loan applications, and client onboarding documents.
Government Records & Archives	Restores, digitizes, and preserves operational and historical documents correctly.
Healthcare Records Management	Restoring and securing patient records, insurance forms, and handwritten notes.
Corporate Records	Managing HR files, procurement documents, and internal communications with improved integrity and accessibility.
Legal Discovery & Compliance	Preparing case files, contracts, and deposition records for fast retrieval and legal discovery processes.

Feature	Requirement
Compatible NVIDIA Hardware	NVIDIA RTX™ PRO Series
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, combined with intelligent document optimization, sets a new standard for document and records management. Whether facing degraded archives, operational document flows, or compliance-driven digital transformation projects, ProHawk AI ensures that every image becomes an accurate, accessible, and intelligent asset — built for the future.

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