

Computer vision enhances federal customer experience and operational efficiency



Every federal agency is working to meet rising citizen expectations, improve efficiency and turn data into mission outcomes faster. AI-powered computer vision applications are accelerating time to value with their ability to connect video and other data at the edge with broader centralized networks.

These sophisticated systems analyze vast amounts of visual and sensor data with remarkable accuracy, providing agencies with crucial insights for decision-making across a wide variety of applications. From automating routine document processing to enhancing security protocols to optimizing resource allocation and supply chains, computer vision is fundamentally reshaping how federal agencies operate and serve the public.

The serviceable addressable computer vision market is estimated at \$60 billion over the next 12 months, according to research compiled by ProHawk. The federal government represents an important 20 percent of this market.

To answer the call, Dell Technologies and NVIDIA have collaborated to create the Dell AI Factory with NVIDIA, which is the industry's first and only end-to-end enterprise

AI solution*, designed to speed AI adoption by delivering integrated Dell and NVIDIA capabilities to accelerate your federal AI-powered use cases. The addition of ProHawk AI creates the leading technology solutions to fulfill federal computer vision requirements. Together, Dell Technologies, NVIDIA, and their partners are discussing many computer vision opportunities with federal agencies. These opportunities include improving facilities management and enhancing service delivery.

ProHawk AI

ProHawk AI's patented technology—driven by industry-leading automated image restoration algorithms—dramatically enriches the quality of live and recorded camera streams. Processing latency is undetectable to the human eye, enabling faster outcomes and superior accuracy without the need to retrain existing AI models.

*Based on Dell analysis, July 2024. Dell offers solutions with NVIDIA hardware and software engineered to support AI workloads from PCs with AI-powered features and workstations to Servers for High-performance Computing, Data Storage, Cloud Native Software-Defined Infrastructure, Networking Switches, Data Protection, HCI and Services.

Improving facilities management

The General Services Administration oversees an extensive real estate portfolio spanning [363 million square feet](#) across laboratories, data centers, office buildings and more. Computer vision helps operators ensure the safety and security of personnel and assets, create operational efficiencies and improve employee experiences. Agencies can:

- Monitor behavior patterns to prevent unauthorized access to secure areas
- More precisely inspect items moving through facilities and screen for suspicious objects
- Analyze spaces to identify and address accessibility barriers for people with disabilities
- Gain a better understanding of traffic flow to identify areas of congestion to optimize service delivery
- Develop predictive maintenance models that reduce equipment downtime and deliver the highest possible service levels

By implementing predictive modeling for deferred maintenance and repair decisions, agencies could potentially [save more than \\$100 million¹](#).

Enhancing service delivery

Computer vision also helps agencies deliver high-quality, personalized services to citizens and federal employees. To close the gap between public and private sector customer experience, agencies are implementing computer vision solutions to:

- Enable automated document processing to improve efficiency claims processing, passport/visa applications, tax form processing and more

- Provide real-time visual translation of documents or signage
- Manage ebbs and flows of customer demand with flexible response systems
- Analyze and categorize citizen queries for quicker and more accurate responses
- Enhance coordination between departments and agencies so that resources are distributed more effectively

Dell and NVIDIA Validated Design solutions for computer vision

The Dell AI Factory with NVIDIA combines Dell’s compute, storage, client devices, software, and services with NVIDIA’s advanced AI infrastructure and software suite, all connected via a high-speed networking fabric. This integration facilitates seamless deployment and scaling of AI applications, including computer vision. Dell and NVIDIA computer vision solutions address critical federal needs with unmatched visual clarity and speed, enabling critical decision-making in near-real time.

Designed to overcome implementation challenges

Often, the biggest challenge for organizations implementing computer vision is the length of time from planning to deployment. That’s because a fit-for-purpose solution requires an ecosystem of partners handling everything from cameras and sensors to networking, compute, data, storage, software applications, analytics and security – and integrating these components and processes takes time and resources.

The Dell and NVIDIA solution to implementation challenges is a scalable platform of integrated components, capable of hosting multiple applications from video management system and computer vision software partners for solutions extending from the edge to the core to the cloud.

¹<https://www.gao.gov/assets/gao-24-106915.pdf>

Key benefits and value

- 1 **Curated partner ecosystem:** The Dell AI Factory with NVIDIA incorporates key partners to bring together otherwise fragmented components into a consolidated, streamlined workflow solution to lower investment risk
- 2 **Comprehensive, lab-validation test approach:** To help deliver a solution that works for your organization from day one, Dell Technologies and NVIDIA align validation standards with our partners to test hardware and software in extreme, real-world scenarios
- 3 **Scalable and proven solutions:** Our approach decreases time to value by bringing together the right hardware and software from edge to core to cloud needed to precisely suit your particular use case. Our solutions can scale from point solutions to enterprise environments
- 4 **Dedicated global subject matter experts:** Maximize the value of your investment by relying on our global network of subject matter experts for guidance with infrastructure and data management, including video workloads, workflows, and data governance

By partnering with Dell Technologies and NVIDIA, organizations gain access to a comprehensive solutions portfolio and computer vision expertise. This partnership helps reduce the risk, cost, and complexity of implementation by leveraging the right mix of technologies to fit specific use case requirements.

The services within the Dell AI Factory with NVIDIA provide an edge-to-client-to-server-to-cloud (or edge-to-enterprise) computer vision system, simplifying deployment with orchestration and automation.



Learn more:



[Discover how](#) the Dell AI Factory with NVIDIA accelerates outcomes



[See how](#) Dell Technologies and NVIDIA develop computer vision solutions



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