

HEALTHCARE AI SOLUTIONS

Democratizing AI in Healthcare with Intel® and Dell Technologies



Introduction

In the rapidly evolving landscape of healthcare and life sciences, the integration of computer vision solutions heralds a transformative era marked by unprecedented advancements in diagnostics, treatment, and research. Leveraging the power of artificial intelligence (AI) and image processing, computer vision technologies are revolutionizing the way medical professionals analyze, interpret, and act upon visual data. From enhancing medical imaging accuracy to automating repetitive tasks and facilitating early disease detection, these solutions are poised to redefine patient care, streamline workflows, and unlock new insights into complex biological phenomena. As healthcare providers and researchers increasingly turn to innovative technologies to address pressing challenges, the adoption of computer vision solutions emerges as a pivotal strategy to propel the industry forward into an era of precision medicine and data-driven decision-making.

Despite all these advances in the industry, the development of computer vision models continues to present a complex and time-consuming challenge. Traditional approaches to AI development demand specialized expertise, access to vast datasets, and are hindered by slow development cycles. Moreover, the journey from data labeling to model deployment lacks clarity, further impeding progress. These obstacles underscore the pressing need for a comprehensive solution that streamlines the development and deployment of computer vision AI platforms, facilitating innovation and enhancing outcomes in healthcare and life sciences.



KEY FEATURES OF THE SOLUTION:

- **Smart Annotations:**
Expedite data labeling and training.
- **Active Learning:** Achieve a working AI model with less data.
- **Optimizations:**
Automatically optimize and quantize vision models.
- **Task Chaining:** Combine multiple vision tasks.
- **SDK Support for REST API:**
Simplify and automate the development pipeline.
- **Intuitive Platform:** Does not require expertise in AI to build AI models.

The Intel® Geti™ Platform: Empowering collaboration, simplifying workflows, and driving impactful AI solutions in healthcare and life sciences

The Intel Geti platform, a groundbreaking solution designed to democratize computer vision artificial intelligence (AI) model development together with Dell Technologies aim to drive revolutionary innovation in healthcare. The platform empowers organizations to seamlessly integrate vision AI into healthcare workflows, by accelerating model training processes and making AI accessible to all.

Revolutionizing healthcare: The Intel Geti platform and Dell Technologies' compute infrastructure solutions

Intel Geti is designed for building computer vision AI models. And Dell Technologies contributes its expertise in infrastructure, hardware, and deployment solutions.

The platform allows healthcare professionals to actively participate in AI model development. Caregivers contribute their domain expertise to algorithm training, resulting in solutions that enhance daily workflows and patient care. This results in:

- **Simplified Workflows:** With the Intel Geti platform, tasks like data labeling, model training, and testing can be accomplished by individuals closer to the subject matter. The ease of use of the Intel Geti platform empowers users to actively participate in AI development without prior AI expertise. By lowering the barriers to entry, the Intel Geti platform enables a diverse range of professionals to contribute to AI-driven innovations in healthcare. This democratization of AI development accelerates innovation.
- **Iterative Learning:** The platform enables iterative model improvement. As caregivers review AI model predictions and make adjustments, the learning process rapidly evolves. Real-time annotations and adjustments enable the practical application of AI in clinical settings, enhancing diagnostic capabilities and improving patient outcomes. And the inferencing model can be integrated into clinical operations like e.g., point-of-care ultrasound pipelines.
- **Efficiency and Adaptability:** Beyond problem-solving, the platform enhances solutions by making them more efficient, adaptable, and cost-effective. The Intel Geti platform can complete complex AI training tasks swiftly, highlighting the unparalleled speed and performance enabled by Dell and Intel's groundbreaking hardware and software. The Intel Geti platform significantly shortens the time-to-value of AI model development, making it an indispensable tool for digitization and automation projects. This is especially important in clinical settings, where time and resources are of the essence.
- **Inclusivity and Empowerment:** The Intel Geti platform's inclusivity aspect is highlighted through the fact that even biomedical engineering undergraduates with minimal AI experience can utilize it—empowering domain industry experts to harness the potential of AI without extensive backgrounds in the field. By simplifying workflows in AI model development, the Intel Geti platform enables a diverse range of professionals to contribute to AI-driven innovations in healthcare, fostering collaboration and driving progress.



Amplifying AI solutions: The collaboration between Intel and Dell Technologies in patient care

In essence, while AI offers immense potential, it is not a cure-all; rather, it is a tool with boundless possibilities. Effectively harnessing its power requires a careful balance—embracing its potential while mitigating its risks. As we navigate this complex landscape, healthcare leaders must leverage technology alongside human expertise and streamlined processes to cultivate resilience. This holistic approach ensures that the principle of "doing no harm" extends beyond physical realms into the digital sphere.

The Intel Geti platform, together with Dell Trusted Infrastructure, seamlessly integrate AI into healthcare workflows, streamlining model training processes and empowering industry experts to spearhead innovation. With artificial intelligence tailored to your organization's data, our AI solutions accelerate intelligent outcomes, optimizing IT infrastructure and fostering business growth. As part of the commitment to AI and computer vision, Intel continues to add new hardware and software capabilities, along with accelerators, and through optimizations with OpenVINO™, Intel Geti platform users can continue to leverage inference acceleration during runtime. In summary, the collaboration between Intel and Dell Technologies delivers cutting-edge AI capabilities to healthcare organizations, empowering clinicians and driving positive impact in patient care. The Intel Geti platform enables enterprises to focus on deploying and leveraging AI, rather than solely building it, serving as a crucial component for AI optimization and deployment across diverse environments.

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