NetApp AI solutions for medicine

Enhance patient care and improve operational efficiency

The challenge

Healthcare costs are rising. Physicians, nurses, and administrators are burning out. Data privacy and security are more important than ever. And to complicate matters even further, the pressure to hit Quadruple Aim targets—enhance the patient experience, improve population health, better the work life of clinicians, and reduce costs—has never been greater.

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To address these challenges, medical organizations across the globe are turning to AI to modernize healthcare and drive transformation in just about every aspect of the industry. From automating mundane administrative tasks to enabling faster and more accurate patient diagnoses to fast-tracking drug development, AI is at the heart of it all.

- **Automate administrative tasks.** AI is used for self-scheduling appointments, inputting data into the electronic health record (EHR), and managing paperwork. Up to 40% of administrative tasks can be automated with AI, allowing personnel to focus on more important responsibilities.[1]

- **Streamline diagnoses.** AI helps radiologists detect diseases such as lung cancer earlier and faster—sometimes before symptoms appear.[2]

- **Fast-track treatment research.** AI is the driving force behind accelerated drug and vaccine development as well as development of targeted therapeutics for genetic diseases.

- **Predict risks and manage population health.** AI gives healthcare providers the tools and information they need to identify high-risk patients and proactively manage their health using remote monitoring devices.

NetApp® AI solutions help make sure that your data is always available in the right place at the right time to fuel transformation. We remove data silos to help you provide real-time diagnosis, speed up time to market for new drug treatments, and to streamline administration. As the data authority on hybrid cloud, NetApp delivers AI solutions that remove bottlenecks at the edge, core, and cloud. By removing these bottlenecks, NetApp enables more efficient data collection, accelerated AI workloads, and smoother cloud integration. Whether you're crunching petabytes of genomics data or analyzing medical images from thousands of patients, NetApp solutions for AI seamlessly integrate with the world's biggest public clouds, allowing you to choose the best clouds for your workload.

Key benefits

Get the speed you need to enhance patient care

- Keep your data flowing to feed, train, and operate your applications so that they can provide the real-time information you need to detect diseases, predict health risks, and automate administrative tasks.

Extract the most value from your data

- Gain deeper insights into your data with a simplified AI solution that enables you to harness and analyze data from multiple disparate data sources.

- Reduce the amount of time your data scientists spend wrangling data so that researchers can get new treatments to market faster and physicians have the information they need to quickly and accurately diagnose patients.

Keep your data protected

- Get trusted data protection, compliance, and secure access for your distributed, diverse, and dynamic data.

Grow without limits

- Start small and grow seamlessly—from hundreds of terabytes to tens of petabytes—without disrupting ongoing operations.

- Run an exhaustive array of simulations to test the robustness of your models.

Get the speed you need to enhance patient care

AI can be a powerful tool for enhancing patient care and keeping costs under control. To be successful, you need a data management solution that can keep up. NetApp ONTAP® AI gives you the performance you need to feed, train, and operate your applications. With that high performance, your applications can deliver the information needed to quickly and accurately detect diseases, predict health risks, provide responsive virtual nursing care, and automate administrative tasks such as scheduling.

NetApp All Flash FAS (AFF) keep data flowing to deep learning (DL) processes with the industry's fastest and most flexible all-flash storage. You can expect to get up to 300GBps read throughput per all-flash cluster with well under 1ms of latency.

By adding more network switches and storage controller pairs to the ONTAP cluster, the architecture can scale to multiple racks to deliver extremely high throughput, accelerating model training and inferencing. With this flexible approach, you can alter the ratio of compute to storage independently based on the size of the data lake, the models that you use, and the performance metrics you need.

Extract the most value from your data

All data is valuable, especially in healthcare where that data translates into better patient care, faster diagnoses, and targeted treatments for everything from viruses to genetic diseases. To truly unlock the potential of AI in healthcare, you need to capture, prepare, access, move, and protect large volumes of patient and research data from multiple sources—and petabytes of images from thousands of different sources. You need a way to harness and extract the most value from your data as quickly as possible. That requires powerful AI capabilities that reach from the edge to the core to the cloud—without adding to the complexities that are inherent in an AI environment.

Only NetApp can help you build a data fabric that satisfies the needs of complex, high-performance data pipelines with solutions that span your entire hybrid multicloud environment. NetApp AI solutions help you simplify management of datasets, enabling you to reduce errors and operational cost with a platform that's built for the enterprise.

Keep your data protected

The growth in data from AI can make it difficult to keep up with constant security threats and ever-changing compliance requirements. With NetApp, you can provide trusted data protection, compliance, and secure access for your distributed, diverse, and dynamic AI data.

NetApp enables you to integrate, protect, and secure a data pipeline from edge to core to cloud. Our unified data solution supports multiple data formats. With data encryption at rest and in flight, data is protected wherever it lives or wherever it moves to. Have confidence knowing that you can rely on a 25-year leader in NFS innovation with a broad AI ecosystem and 24/7 worldwide services and support.

Grow without limits

As AI adoption spreads across the healthcare industry, organizations face another boom in data growth. With NetApp solutions for AI, you can confidently tap into growing data sources with nearly unlimited, nondisruptive scalability and performance. NetApp offers a powerful unified data solution to feed, train, and operate data-hungry AI, ML, and DL applications.

The NetApp rack-scale architecture allows organizations to start with an AFF A250 and grow as needed to scale from hundreds of terabytes to tens of petabytes with all-flash storage. And with NetApp ONTAP FlexGroup, up to 20 petabytes of single namespace can handle more than 400 billion files.

Breakthrough AI solutions for medicine

NetApp helps you hit your Quadruple Aim targets with AI solutions that remove bottlenecks and enable your data to flow swiftly and securely from diagnostic solutions at the edge, throughout clinical applications, and to cloud environments. Our solutions solve performance and security challenges to help you improve patient care and your bottom line. With NetApp, your medical data is always available in the right place at the right time to fuel transformation. Our proven AI solutions remove data silos to enable real-time diagnosis, faster time to market for new drug treatments and streamlined administration.

Learn more about NetApp AI solutions for medicine.

About NetApp

In a world full of generalists, NetApp is a specialist. We're focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world's biggest public clouds.

As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your cloud, and securely deliver the right data, services and applications to the right people—anytime, anywhere. www.netapp.com

1. https://www.aha.org/system/files/media/file/2019/09/Market_Insights_AI_Workforce_2.pdf
2. https://roboticsandautomationnews.com/2020/03/09/how-ai-technologies-accelerate-progress-in-medical-diagnosis/31184/