DELLTechnologies

Artificial Intelligence

Accelerate intelligent outcomes everywhere.

INNOVATE WITH AI

Data is powering change in every industry across the globe

AI isn't coming. It's already here, with more than a quarter of organizations reporting full-scale deployment of five or more types of AI applications.[1] The rise of AI is fueled by advancements in machine learning (ML) and deep learning (DL), allowing organizations in every sector to reduce risk, move faster and gain deeper insights and value from their data.

AI is producing value and propelling digital progress using millions of data points collected from traditional data sources and, increasingly, from the edges of the enterprise. But in a typical organization, only a small portion of available data is used to guide decision making. Widening the spectrum of data you can use enables you to tap its hidden potential, leveraging powerful AI applications to help you answer bigger questions and make more amazing discoveries, faster, to keep pace with competition coming from every angle.
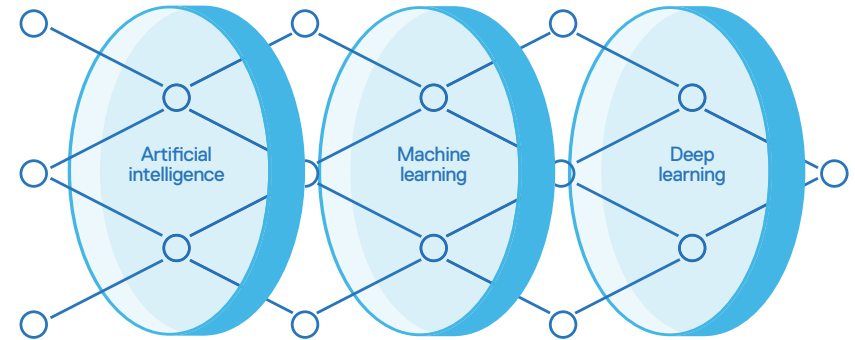
Dell Technologies enables you to identify, curate and activate your high-value data so it can create measurable value for your organization. We help you put AI to work anywhere in any way to fast track innovation everywhere. And we help you achieve success at any scale as you grow, so you can AI-optimize any part of your business.

DEEP INSIGHTS

The power behind AI

AI is a complex set of technologies underpinned by ML and DL algorithms. Together, AI, ML and DL enable you to gain deeper insights and more value from your data.

The capabilities of AI, ML and DL can drive revenue growth through predictive and prescriptive analytics on a massive scale. Your teams can gain deeper, more accurate insights to quickly identify trends and patterns that would otherwise be difficult and time-consuming — or impossible — to detect.

AI is an umbrella term that describes a machine's ability to act autonomously and/or interact in a human-like way.

ML refers to the ability of a machine to perform a programmed function with the data given to it, getting progressively better at the task over time as it analyzes more data and receives feedback from users or engineers.

DL uses artificial neural networks (ANNs) and deep neural networks (DNNs), inspired by the human brain, to process huge volumes of data. ANNs and DNNs allow the machine to determine on its own if a prediction is accurate so that it can train itself without human intervention.

How AI is being used

AI offers new opportunities for enhancing the customer experience and boosting innovation, productivity and efficiency across a broad range of use cases.

Healthcare and life sciences

- Population health
- Disease detection and prevention
- Chronic illness prediction
- Drug discovery
- Drug interactions
- Genetics
- Bioinformatics

Financial services

- Fraud prevention
- Risk analysis
- Trade optimization
- Market predictions
- Customer service
- Smart marketing
- Digital assistants
- Credit evaluation

Government security and defense

- Facial recognition
- Video monitoring
- Cybersecurity
- Satellite imagery
- Event prediction
- Emergency response
- Weather and climate predictions
- Smart cities

Media and entertainment

- Computer-generated imagery (CGI) and visual effects (VFX)
- Immersive entertainment
- Recommendation engines
- Real-time translation
- Intelligent data streaming

Manufacturing

- Smart manufacturing
- Demand analytics and optimization
- Preventive maintenance
- Relationship intelligence
- Product and service quality

Energy

- Carbon emissions and credit trading
- Power usage analytics
- Price optimization
- Oil production optimization
- Weather prediction
- Supply and demand optimization

Retail

- Supply and demand forecasting
- Inventory optimization
- Predicting buying behavior
- Loss prevention
- Personalized marketing
- Smart stores

Transportation

- Autonomous vehicles
- Pedestrian and object detection
- Lane tracking and traffic patterns
- Logistics and transport optimization
- Smart traffic routing

PROVEN EXPERTISE

AI solutions from an industry leader

While AI might seem like the latest IT trend, Dell Technologies has been a leader in advanced computing for more than a decade.

Dell Technologies is at the forefront of AI, providing the technology that makes tomorrow possible today. With an AI solution portfolio that encompasses a wide selection of options, purpose-built for today's top data transformation goals, Dell Technologies provides the expertise, IT power and streamlined solutions you need to accelerate intelligent outcomes. We've spent decades optimizing our products, services and strategic partnerships to empower your teams to do their best work.

Dell Technologies

Dell Technologies helps organizations and individuals build their digital future and transform how they work, live and play. The company offers the industry's broadest and most innovative technology and services portfolio for the data era. Together, we help you explore the possibilities of AI, introduce it into your organization, and use it for the greater good.

Dell Technologies is committed to a culture of integrating ethics and compliance into daily decision-making. We believe in acting ethically in everything we do. It is good business and important to our customers, suppliers and strategic partners. As a result, critical programs have been developed to address key risks across the enterprise, creating trust with our customers.

DELIVERING VALUE

The AI value chain

Wherever you are on your journey, Dell Technologies delivers AI systems that fulfill your needs.

Dell Technologies helps you identify, curate and activate your high-value data, put AI to work anywhere in any way, and achieve success at any scale as you grow.
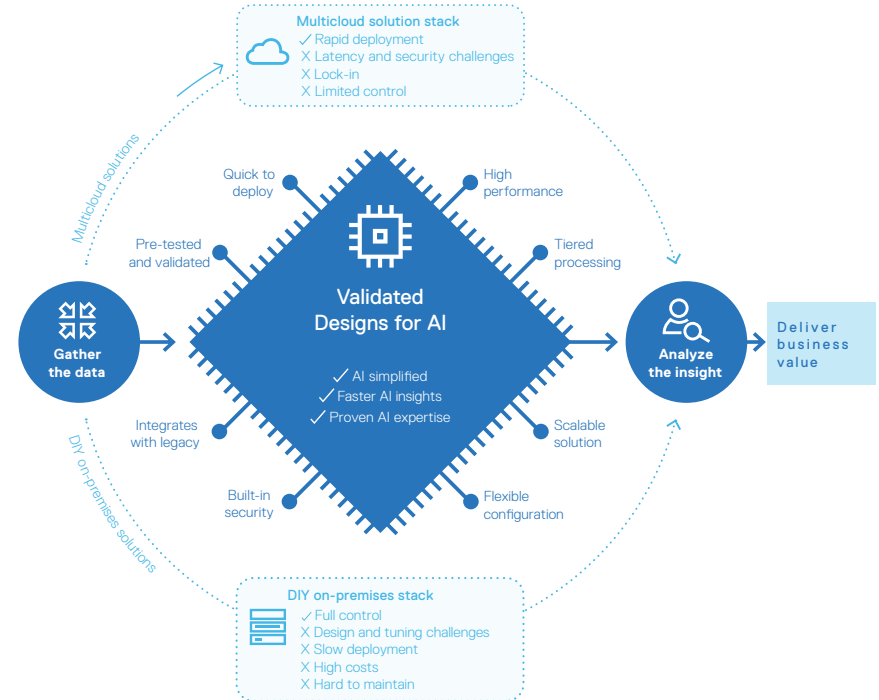
- **Identify, curate and activate your high value data**, by enabling effective data access and control from edge to core to cloud. This includes simplifying your data landscape with an extensive, ops-ready portfolio that can be delivered via cloud-to-ground Dell APEX as-a-Service. It also includes helping you move forward with data-driven confidence by tapping into a wealth of resources for AI expertise and collaboration.

- **Put AI to work anywhere in any way** to fast-track innovation, powering your AI workloads with a choice of best-in-class IT infrastructure that supports on-premises, cloud or hybrid environments with protection across boundaries. Enable AI within your existing infrastructure and run compute and I/O-intensive workloads everywhere with an extensive selection of PowerEdge servers, storage architectures and fast networking. You can choose from options purpose-built for containers and virtual desktop infrastructure (VDI) along with engineering-tested Dell Validated Designs for AI.

- **Achieve success at any scale as you grow** with the ability to AI-optimize any part of your business as your data grows and use cases change. Dell Technologies can help enable 37% more efficient IT teams and 12% faster development cycles,[2] resolve performance issues 2–10X faster,[3] and run AI models 18x faster.[4] Independent asynchronous scaling of compute and storage along with fast Dell PowerSwitch networking enable flexible growth. You also have the option to increase IT agility while improving cost predictability with APEX technology as-a-Service. This scalability and flexibility help our customers process 150,000 AI-driven requests per second[5] and reduce inspection times by 120:1.[6]

SIMPLIFYING THE COMPLEX

Validated Designs for AI

Designing and deploying an AI system with the performance and scalability required can be complex.

Dell Technologies has invested to create a portfolio of Validated Designs for AI that are optimized, tuned and tested for key use cases. They include the servers, storage, networking, software and services that have been optimized and proven in our labs and in customer deployments. Plus, the modular building blocks provide a customizable yet validated approach for deploying new clusters or upgrading existing systems.

Multicloud solution stack
✓ Rapid deployment
X Latency and security challenges
X Lock-in
X Limited control

Multicloud solutions

Quick to deploy

High performance

Pre-tested and validated

Tiered processing

Validated Designs for AI

✓ AI simplified
✓ Faster AI insights
✓ Proven AI expertise

Gather the data

Analyze the insight

Deliver business value

Integrates with legacy

Scalable solution

DIY on-premises solutions

Built-in security

Flexible configuration

DIY on-premises stack
✓ Full control
X Design and tuning challenges
X Slow deployment
X High costs
X Hard to maintain

THE BENEFITS

Validated Designs for AI

Dell Validated Designs accelerate time to value with solutions designed for the intelligent business.

AI SIMPLIFIED

Joint engineering and validation make it quick and easy to deploy an AI solution optimized to accelerate AI initiatives, increase data scientist productivity, and simplify IT operations and management. Customers report that Validated Designs enable 20% faster time to value, while boosting employee productivity by 30% and reducing AI-related help desk tickets by 60%.[7] In addition, Dell Technologies offers a single point of contact for hardware and software with ProSupport Plus.

FASTER AI INSIGHTS

Validated Designs give you unprecedented performance for enterprise AI. For example, Dell VxRail integrated with NVIDIA AI Enterprise and GPUs with Dell PowerScale storage improves AI model training accuracy with fast access to larger data sets, enabling live inferencing at scale to drive real-time, actionable responses. VxRail enables 44% faster deployment of new VMs,[8] while with Validated Designs, customers report 4x team performance and business growth.[7]

PROVEN AI EXPERTISE

You can confidently deploy an engineering-tested AI solution backed by world-class Dell Technologies Services and support. Our worldwide Customer Solution Centers with AI Experience Zones enable you to leverage engineering expertise to test and optimize solutions for your environments. Our expert consulting services for AI help you plan, implement and optimize AI solutions, while more than 35,000 services experts[9] can meet you where you are on your AI journey.

THE DELL TECHNOLOGIES DIFFERENCE

Services and financing

Dell Technologies partners with you every step
of the way, linking people, processes and technology
to accelerate innovation and enable optimal outcomes.

- **Consulting services** help you create a competitive advantage for your business. Our expert consultants work with companies at all stages of analytics to help you plan, implement and optimize solutions that enable you to unlock your data capital and support advanced techniques, such as AI, ML and DL.
- **Deployment Services** help you streamline complexity and bring new IT investments online as quickly as possible. Leverage our 30-plus years of experience for efficient and reliable solution deployment to accelerate adoption and return on investment (ROI) while freeing IT staff for more strategic work.
- **Support Services** driven by AI and DL will change the way you think about support with smart, ground-breaking technology backed by experts to help you maximize productivity, uptime and convenience. Experience more than fast problem resolution — our AI engine proactively detects and prevents issues before they impact performance.

- **Payment Solutions** from Financial Services help you maximize your IT budget and get the technology you need today. Our portfolio includes traditional leasing and financing options, as well as advanced flexible consumption products.
- **APEX** offers a simple approach that gives you a wide range of consumption models, payment solutions and services so you can optimize for a variety of factors while realizing more predictable outcomes.
- **Managed Services** can help reduce the cost, complexity and risk of managing IT so you can focus your resources on digital innovation and transformation while our experts help optimize your IT operations and investment.
- **Residency Services** provide the expertise needed to drive effective IT transformation and keep IT infrastructure running at its peak. Resident experts work tirelessly to address challenges and requirements, with the ability to adjust as priorities shift.

GET IN TOUCH

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www.connection.com/Dell

NVIDIA.

[1] Deloitte Insights, Becoming an AI-fueled organization, 2021.

[2] An IDC Business Value Executive Summary, sponsored by Dell Technologies and Intel, The Business Value of Dell Technologies APEX as a Service Solutions, August 2021.

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[5] Dell Technologies case study, Taboola Makes AI Real, August 2020.

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[7] Forrester, The Total Economic Impact of Dell EMC Ready Solutions for HPC, April 2020.

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