DELL Technologies

10 Questions to Kickstart AI Initiatives

Conversation starters for everyone from IT pros to CEOs

Get Started

NVIDIA

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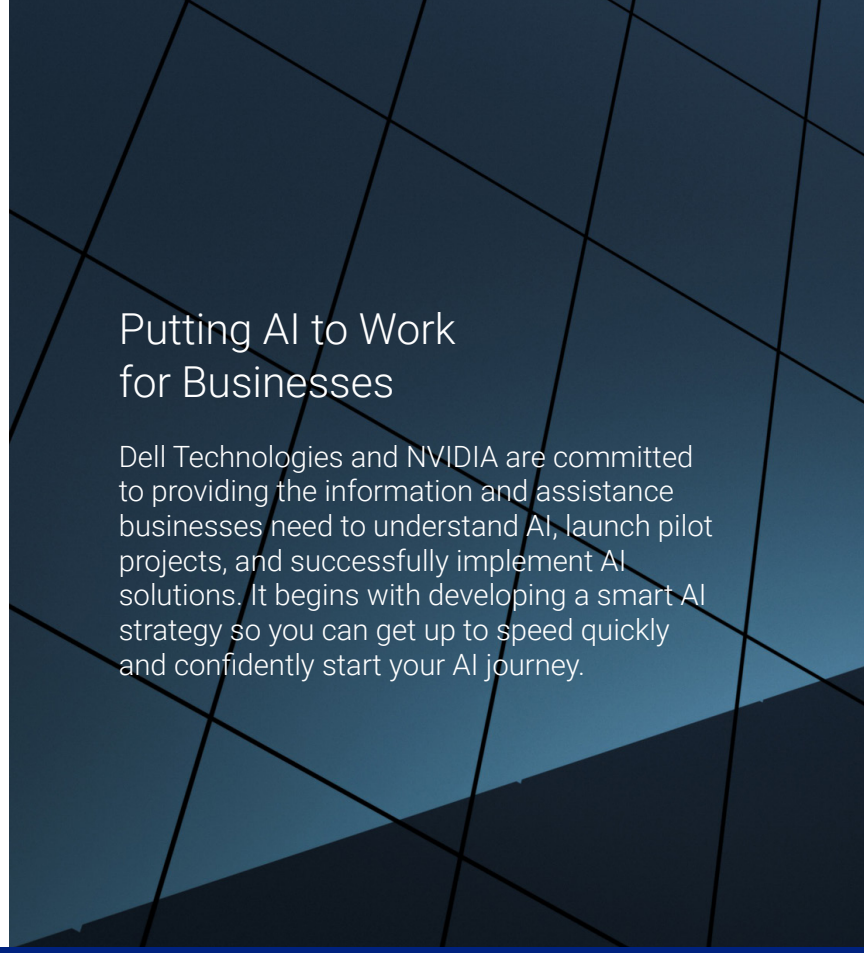
Introduction

Gaining consensus and momentum on an AI strategy for your business can be challenging due to the diverse teams involved and their varying degrees of AI knowledge. This starter guide can help you prepare for and facilitate productive AI discussions between technical and nontechnical stakeholders, including IT, data science, C-suite, finance, and legal. It poses 10 questions that can assist with “right-sizing” AI for your business.



Putting AI to Work for Businesses

Dell Technologies and NVIDIA are committed to providing the information and assistance businesses need to understand AI, launch pilot projects, and successfully implement AI solutions. It begins with developing a smart AI strategy so you can get up to speed quickly and confidently start your AI journey.

AI Affects Everybody

- Everyday knowledge users
- Independent software vendors (ISVs)
- Data scientists
- Engineers
- Developers

What is AI?

Artificial intelligence (AI) uses computers and software to perform tasks, learn, make decisions, and solve problems in a way that imitates the human mind. Generative AI produces content like text, images, and sound based on its training data. Predictive AI forecasts future behaviors or events based on historical data and patterns.

AI Glossary

AI Algorithms
Mathematical instructions to execute a particular function

AI Training Data
The "source material" used to teach AI to perform specific tasks

AI Models
The results of AI algorithms learning patterns in AI training data

AI Applications
Leverage AI models to provide the functionality required to complete tasks

AI Hardware
The workstations and servers that house the processors (GPUs, CPUs, NPUs, and TPUs), storage, and networking required to develop, manage, and utilize AI applications

AI Platforms
Comprised of hardware architecture and software frameworks that support AI application development, deployment, and management

Why AI right now for our business?

AI is revolutionizing every industry, accelerating processes, boosting productivity, increasing agility, enhancing efficiency, improving quality, and so much more. Starting small now could lead to a big competitive advantage in the future.

AI Across Industries

Business & Financial Services	Manufacturing & Engineering	Healthcare & Life Sciences	Media & Entertainment

83%

of businesses agree AI will be an essential part of their security strategy[1]

65%

of businesses agree the jobs and skills needed in 2030 have not been invented yet[1]

82%

of businesses agree there will be greater human and machine partnership within five years[1]

What can we accomplish with AI?

Identify a challenge or problem you'd like to address with AI. Gaining alignment on a clear objective tied to business goals will help ensure your AI strategy maintains momentum. Discover how your business can leverage the potential of GenAI with insights, solutions, and strategies for harnessing its transformative capabilities.

Business Challenges That AI Can Help Solve

Decision-making

Analyze vast amounts of data for trends and insights

Use cases: financial planning, strategic planning

Efficiency

Automate repetitive tasks and anticipate maintenance needs

Use cases: inventory management, data entry, CGI rendering

Collaboration

Collaborate in virtual environments to improve and accelerate work

Use cases: remote teams, multilingual teams

Innovation

Simulate processes, run virtual experiments, and generate numerous design alternatives

Use cases: rapid prototyping, design visualizations

Customer Satisfaction

Personalize experiences with recommendations and expedite service with chatbots

Use cases: customer service, technical support

Security

Monitor data for potential security threats and respond in real time

Use cases: fraud detection, customer privacy

Business Continuity

Dynamically reallocate resources, reduce errors, or optimize energy consumption

Use cases: predictive maintenance, quality control

Which of our processes could benefit from AI?

Identify viable tasks for improvement. The following characteristics could help you pinpoint which process you'd like to tackle.

Characteristics of Common Tasks for AI Integration

Repetitive	**Examples:** Data entry, maintenance protocols, CGI texture mapping
Error-prone	**Examples:** Quality control, logistics, financial transactions
Time-consuming	**Examples:** Data analysis, motion capture processing, inventory management
Complex	**Examples:** Predictive analysis, natural language processing, image and video analysis
Urgent	**Examples:** Supply chain logistics, just-in-time manufacturing, image and video upscaling
Personalized	**Examples:** Product recommendations, content suggestions, customer service
Rule-based	**Examples:** Machine setup and adjustments, CGI ray tracing

What kind of data do we have to work with?

Assess your data to determine availability, quality, and scalability, all of which affect the performance of AI models.

What to Consider When Reviewing Data for Use with AI

Availability

- Sources
- Types
- Formats
- Quantity
- Consolidation

Quality

- Accuracy
- Completeness
- Consistency
- Bias
- Timeliness

Scalability

- Volume
- Complexity
- Variety
- Velocity
- Security

Can our current IT infrastructure support AI?

Evaluate your existing systems to understand how your AI solution will integrate, what you need to upgrade to ensure performance and security, and how you'll scale up and down.

AI Infrastructure Checklist

Integration

How will your AI solution work with your current IT infrastructure?

Example: Data silos and incompatible formats need to be addressed to ensure AI runs smoothly.

Scalability

How will you handle usage spikes and future growth?

Example: As the amount of AI data grows, so does the need for more powerful processing, storage, and networking.

Performance

Do you have the required processing power, storage capacity, and networking bandwidth/latency?

Example: Deep learning workloads require the kind of significant computing power provided by high-performance GPUs.

Security

Does your existing infrastructure meet the security, privacy, and regulatory requirements of your AI workloads?

Example: To help prevent data poisoning, AI model monitoring processes need to be implemented.

How will we deploy AI?

Explore your deployment options. Your best choice depends on what's most important to your business: security, scalability, cost, or integration.

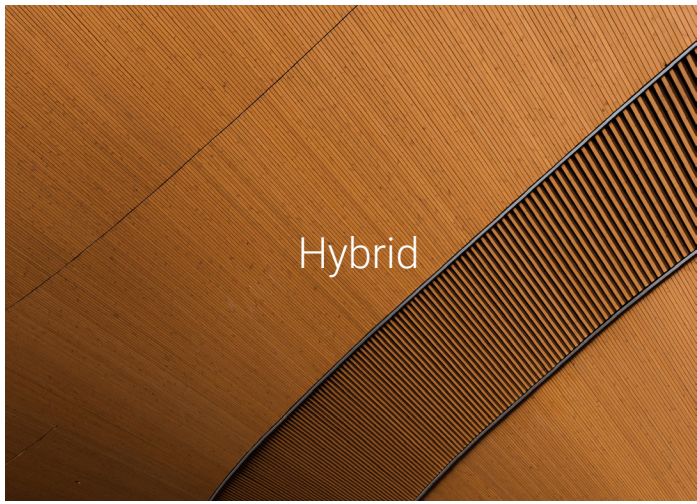
Pros and Cons of AI Deployment Options

Pro: Control

Con: Cost

Pro: Scalability

Con: Privacy



Pro: Flexibility

Con: Integration

How much will it cost, and what's the potential ROI?

Conduct a cost-benefit analysis to weigh your investment against the return you can expect. The following questions can help you explore potential tangible and intangible returns on investment.

ROI Thought Starters

Time

How much time is required to complete a specific task?

Errors

How often are errors made when performing certain tasks?

Satisfaction

What percentage of users are dissatisfied with a particular customer experience?

Resources

What is the current cost of resources required for complex data analysis?

Delivery

How often does a particular task result in late delivery?

How will we mitigate risk?

Consider operational, regulatory, and ethical risks when developing your AI strategy. Completing a comprehensive risk assessment and developing strong AI governance can help you anticipate potential issues.

Considerations for AI Risk Mitigation

Operational	Performance Scalability
Security	Cyberattacks Data manipulation Secure intellectual property
Compliance	Data privacy laws Regulatory requirements
Ethical	Bias Transparency Data sources

Who can help us get started?

The right technology partners for your AI journey will guide you through strategy, implementation, and beyond. They'll have technical know-how, proven experience, and the most innovative solutions.

What to Look for in an AI Partner

- Expertise
- Ecosystem
- Performance
- Longevity
- Innovation

Why Dell and NVIDIA for AI

Expertise

Dell and NVIDIA are your expert advisors with the most advanced knowledge, proven experience, and a commitment to helping businesses implement AI.

Ecosystem

Simplify deployment and scalability with Dell and NVIDIA's comprehensive portfolio of co-designed AI solutions tailored to your business.

Performance

With AI workstations and cutting-edge GPU acceleration, Dell and NVIDIA help you tackle the most demanding AI workloads.

Longevity

Get peace of mind working with two established technology leaders. Dell and NVIDIA are with you every step of the way.

Innovation

Count on Dell and NVIDIA to deliver the continuous optimization you need to maintain a competitive edge as AI advances.

AI-ready solutions from Dell and NVIDIA

Get superior performance and reliability with Dell Precision AI workstations powered by NVIDIA RTX™ GPUs. Configurable with up to four NVIDIA RTX™ 6000 Ada Generation GPUs on the Dell Precision 7960 Tower, they run AI software frameworks 80% faster than the previous generation.[2] Combine Dell Precision workstations with NVIDIA AI Enterprise and AI Workbench GPU-accelerated frameworks, tools, and pre-trained models to get AI projects up and running quickly.

Dell Precision AI Workstation Series

Fixed

Dell Precision 3000 Series

Cost-effective workstations ideal for space-constrained environments and light AI workloads

Dell Precision 5000 Series

Mainstream performance for AI development and deployment

Dell Precision 7000 Series

Ultimate scalable performance for mission-critical AI development and deployment

Mobile

Dell Precision 3000 Series

Small on size and cost with enough power for AI usage, such as inferencing

Dell Precision 5000 Series

Thin and light workstations with the power for heavy-duty AI inference and deployment

Dell Precision 7000 Series

Ultra-performance for the best in AI development and deployment from a mobile workstation

Learn More

AI-ready solutions from Dell and NVIDIA

NVIDIA AI Workbench and NVIDIA AI Enterprise

With NVIDIA AI Workbench, GenAI and deep-learning developers can set up GPU environments easily, giving them the freedom to work and collaborate across various platforms regardless of skill level. NVIDIA AI Enterprise is an end-to-end, cloud-native AI and data analytics software platform optimized so every organization can excel at AI. Simplify AI development and deployment with the included AI frameworks and containers to gather insights faster and deliver business value sooner.

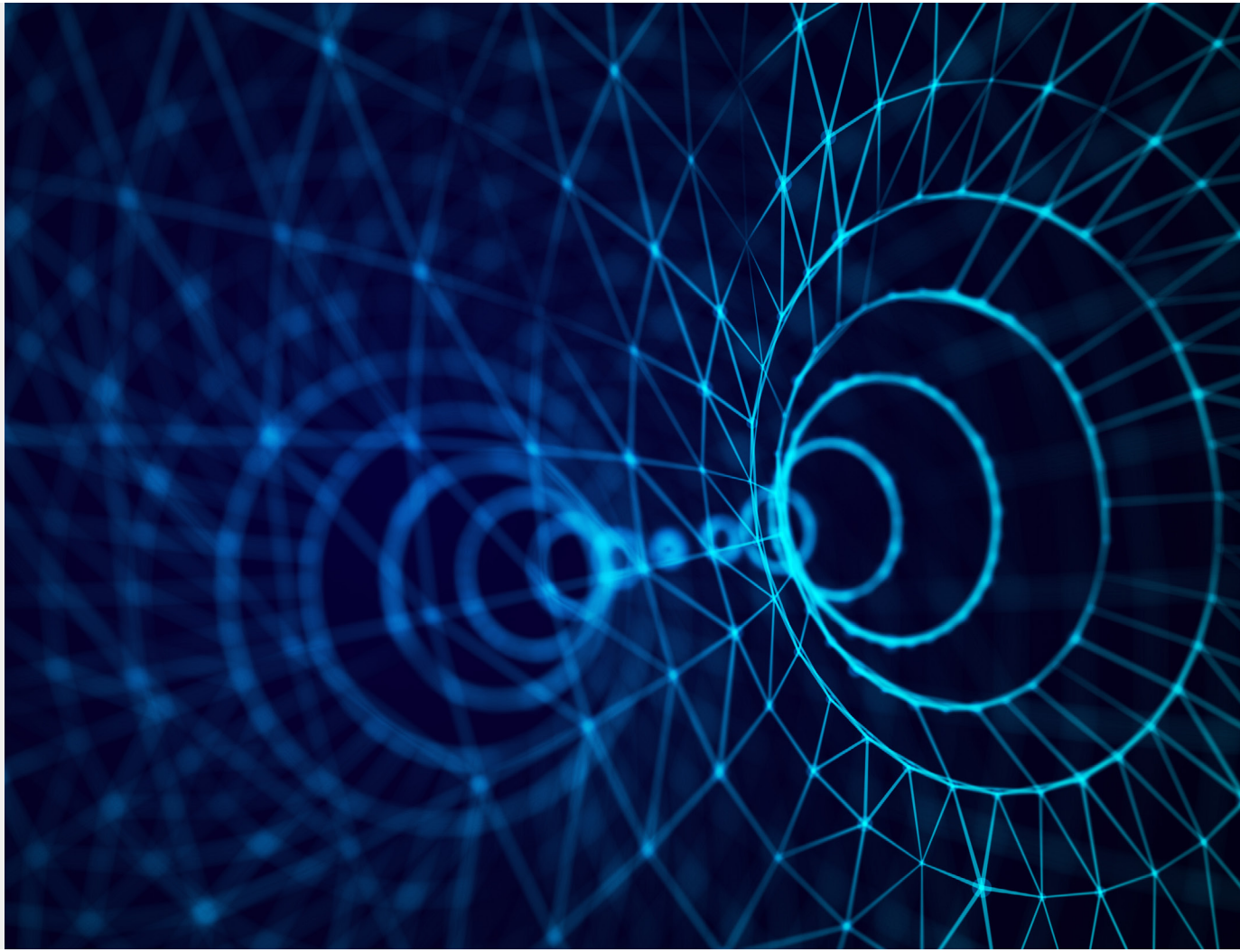
Learn More

AI-ready solutions from Dell and NVIDIA

NVIDIA AI Enterprise Essentials (NVAIE) on Dell Precision workstations

Available on select Dell Precision fixed and mobile workstations, NVAIE is a cutting-edge software platform offering more than 100 frameworks, pre-trained models, and libraries to accelerate the development and deployment of AI applications. NVAIE's easy-to-use microservices optimize model performance and help ensure enterprise-grade security, support, and stability in the cloud, data center, and on workstations. Dell Precision workstations with eligible NVIDIA RTX™ Ada Generation GPUs deliver the computational power required for training, fine-tuning, and inferencing AI workloads.

Learn More



AI-ready solutions from Dell and NVIDIA

Dell AI Factory with NVIDIA

Accelerate AI adoption and workloads using Dell AI Factory with NVIDIA, the industry's first comprehensive AI solution designed to help enterprises quickly capitalize on AI investments. It integrates Dell's compute, storage, client device, software, and services capabilities with NVIDIA's advanced AI infrastructure and software suite, all supported by a high-speed networking fabric.[5]

End-to-end AI Acceleration Framework

Start quickly with full-stack AI-powered use cases and optimized infrastructure with services.

Scale up and out with complete use-case workflows while maintaining performance.

Simplify deployments with automated workflows and turnkey installations.

Enable the workforce to start where they are, from PC desktop and workstation to server and edge.

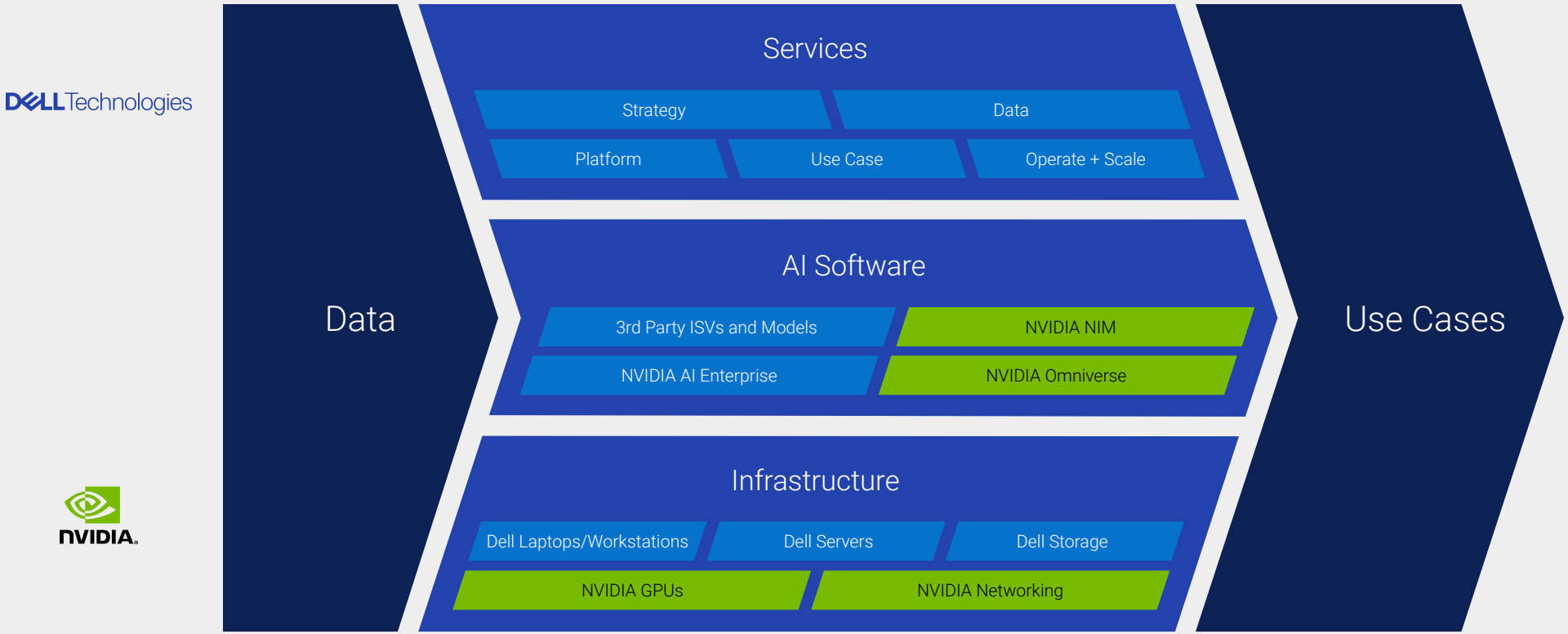
Drive a competitive advantage with hundreds of use cases.

Learn More

AI-ready solutions from Dell and NVIDIA

Dell AI Factory with NVIDIA

From model creation and tuning to augmentation and inferencing, Dell AI Factory with NVIDIA expedites the entire GenAI lifecycle. Customers can also take advantage of professional services that help enterprises accelerate their strategy, data preparation, implementation, and adoption of Dell AI Factory with NVIDIA.



AI-ready solutions from Dell and NVIDIA

Accelerator services for RAG on Dell Precision workstations
Dell's expert consultants can set up a ready-to-use mobile GenAI lab on a Dell Precision workstation and implement a retrieval-augmented generation (RAG) use case with your data. This convenient, cost-effective approach to GenAI exploration enables developers to experiment and demonstrate outcomes in a sandbox environment. This service includes installation and configuration of NVIDIA AI Workbench. Dell transfers knowledge to your team throughout the process so they're prepared to take on new projects.

Jumpstart your GenAI journey

Rapid prototyping in a pre-validated environment

Cost-effective, low-risk exploration of GenAI use cases

Convenient, portable GenAI testing and demonstration

GenAI skills expansion

Learn More

Next steps

Ready to Get Started?	Contact a Dell Technologies Solutions Expert to discuss next steps in your AI journey
Want to Learn More?	Dell Precision AI Workstations Dell Precision AI Workstations Infographic Dell Precision Workstations AI Industry Brochure
Deep Dive Resources	Dell Technologies AI Quick Reference Guide Dell Technologies Deploying AI on Workstations White Paper Dell Technologies AI for Design and Engineering Workflows White Paper

[1] Innovation Catalysts Study, Dell Technologies February 2024 https://www.delltechnologies.com/asset/en-us/solutions/infrastructure-solutions/briefs-summaries/innovation-catalysts-study.pdf.external
[2] Tests run on an Intel i9-12900K, 64GB RAM, Windows 11 Enterprise x64, NVIDIA driver 526.99. Test scores relative performance of PyTorch GNMT V2 Training tests sores. Preliminary results on pre-production hardware and software, final performance may vary.
[3] Based on internal study of competitors and Dell workstation products, January 2024
[4] Based on Dell internal analysis, September 2023. Applicable to PCs on Intel processors. Not all features available with all PCs. Additional purchase required for some features.
[5] Based on Dell analysis, March 2024. Dell offers solutions with NVIDIA infrastructure and software engineered to support AI workloads from Workstations PCs to Servers for High-performance Computing, Data Storage, Cloud Native Software-Defined Infrastructure, Networking Switches, Data Protection, HCI and Services.