Smarter AI for All

Comprehensive AI Solutions for K-12 Education

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Get started with Intel AI for K-12 Education



Smarter technology for all

Lenovo

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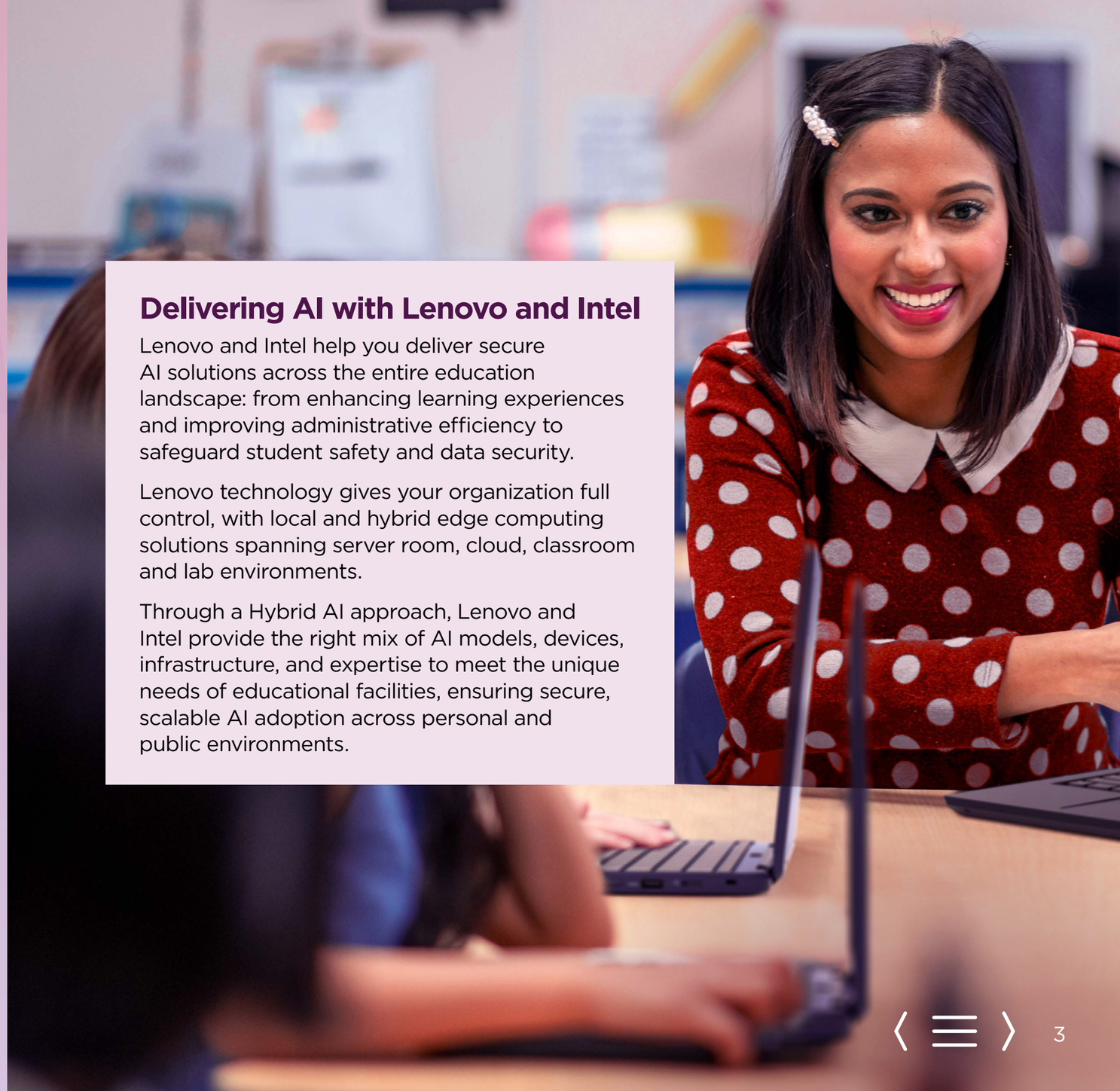


The future of AI in K-12 Education

As AI transforms the world, K-12 Education needs to adapt and change with it. Students will need to develop AI literacy early on, if they're to successfully join the workforce of the future.

AI-based solutions also play a significant role in helping K-12 teachers and other staff address modern issues: improving student engagement, making room for flexible and adaptable learning, enabling inclusive education, and streamlining operational tasks.

AI touches us all. Which is why at Lenovo, we believe in Smarter AI for All. All the options you need to make the most of AI, including the latest devices powered by Intel®, together with groundbreaking software and services, to power a brighter future in K-12 Education.



Delivering AI with Lenovo and Intel

Lenovo and Intel help you deliver secure AI solutions across the entire education landscape: from enhancing learning experiences and improving administrative efficiency to safeguard student safety and data security.

Lenovo technology gives your organization full control, with local and hybrid edge computing solutions spanning server room, cloud, classroom and lab environments.

Through a Hybrid AI approach, Lenovo and Intel provide the right mix of AI models, devices, infrastructure, and expertise to meet the unique needs of educational facilities, ensuring secure, scalable AI adoption across personal and public environments.



What's already happening with AI?

It's no surprise that education leaders are recognizing the benefits of adopting AI strategies. AI offers transformative opportunities for students, educators, and administrators across various areas, helping to strengthen learning experiences, protect student privacy, and modernize school operations.

AI capabilities are increasingly being used to safeguard sensitive student and institutional data, and enable organizations to manage complex compliance regulations like the Family Educational Rights and Privacy Act (FERPA) and the General Data Protection Regulation (GDPR).

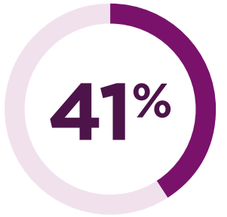
AI innovation is also streamlining routine tasks, helping teachers to spend more time in direct interaction with students. A McKinsey report found that 20 to 40% of teacher tasks—including preparation, administration, and grading—can be automated using existing AI tools.[1]



AI has the potential to free-up **13 hours of K-12 teaching time** per week.[1]



of teachers now use **AI for assessments** and lesson planning.[2]



of school administrators **support AI integration**.[2]

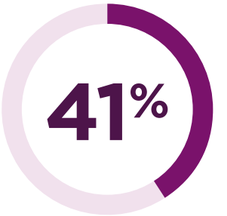
Challenges of implementing AI in K-12 Education

Safety and security are top concerns, as AI expands the potential attack surface, introducing risks such as data breaches and model manipulation that can expose sensitive student and institutional data.

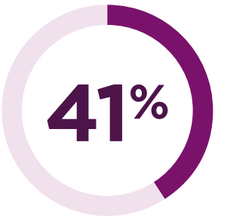
Many institutions face the paralysis that comes after AI proof-of-concept projects: you know this can enhance learning, safety, and collaboration, but how can you scale and implement these systems responsibly and within budget?

Difficulties include:

- Knowing where to start
- A lack of strategic approach (AI for the sake of AI)
- The seven Vs of data: volume, veracity, validity, value, velocity, variability, volatility
- Skillset gaps and teaching shortages
- Managing evolving cybersecurity risks
- Compliance challenges and staying up to date with evolving regulations, including:
  - EU AI act
  - Digital Operational Resilience Act (DORA)
  - FERPA, GDPR, and other local privacy laws
- Difficulty integrating simple or complex data from diverse sources, particularly with legacy systems (data silos) and hallucinations
- Ensuring transparency, explainability, and fairness/lack of bias
- Educator trust around data privacy and resistance to new methods
- Underpowered hardware and devices



of K-12 administrators support the use of AI but only 21% of teachers are as keen.[3]



of senior decision makers in education say their organization is limited by talent challenges.[4]



of education organizations said an AI partner, rather than supplier, was best for successful AI implementation.[5]

AI grounded in security

Along with accuracy, explainability, and transparency, security is a cornerstone of AI integration. This includes adhering to guidelines such as the EU AI Act, as well as ensuring data privacy and information security.

Unlike traditional IT systems, AI solutions must be built on a foundation of strong governance and robust security measures to be responsible, ethical, and trustworthy. We meet these criteria though our Responsible AI commitments, and the solid foundation of component-level security, backed by Supply Chain Assurance.

Our commitment to AI security is reinforced by our Global Security Organization, the appointment of our Chief Security & Artificial Intelligence Officer (CSAIO), and our participation in initiatives like the Joint Cyber Defense Collaborative.





Put the right foundation in place

Lenovo's security-by-design approach provides the foundation for responsible AI solutions. Lenovo ThinkShield and Intel vPro® has you covered at every layer, starting with Supply Chain Assurance to protect your devices from the component level up. It also safeguards your devices from threats below the operating system, all the way to keeping data secure between the operating system and the cloud.

This approach includes:

- Lenovo ThinkShield Zero-Trust practices to help secure devices, infrastructure, and networks.
- Hybrid AI that balances on-premises and cloud processing to protect sensitive data.
- Partnerships with leading security vendors to create a robust ecosystem.
- Lenovo owns and controls our manufacturing, so we can build security into every system and component.
- Governance is embedded, driving security across products and services to maintain a vigilant focus on customers' safety.
- Lenovo's experience and expertise allows us to prioritize innovation, continuously earning our customers' trust.

intel
vPRO

The foundation of responsible AI

To safeguard AI driven applications, AI adoption must be grounded in security. Lenovo's multi-layered approach provides the foundation for responsible, ethical, and secure AI solutions, built upon correct and up-to-date governance.

The Lenovo Responsible AI committee covers a wide array of challenges in the AI space. It makes sure AI is legal, ethical, fair, privacy-preserving, secure, and explainable.

The six pillars of Responsible AI at Lenovo are:

1. Diversity & Inclusion
2. Privacy & Security
3. Accountability & Reliability
4. Explainability
5. Transparency
6. Environmental & Social Impact

Read more on Lenovo's Responsible AI



36%

of ransomware in education **targeted K-12** last year.[4]

74%

of education leaders say **hiring IT employees** is a severe challenge.[8]

Latest figures show a

92%

increase

in K-12 attacks.[7]

Using Teamwork to Leverage AI

The adoption of AI in K-12 Education requires IT teams to take on more dynamic and proactive roles as digital advisors.

Lenovo is a trusted technology partner to over 2,800 educational organizations globally. **With 4 AI Innovation Centers, 18 R&D locations, and an extensive AI partner ecosystem**, Lenovo is uniquely positioned to support K-12 organizations in AI readiness.

From identifying opportunities and use cases to managing data and deploying solutions, Lenovo becomes part of your AI strategy team—no matter where you are on your AI journey.

AI technology: a team approach

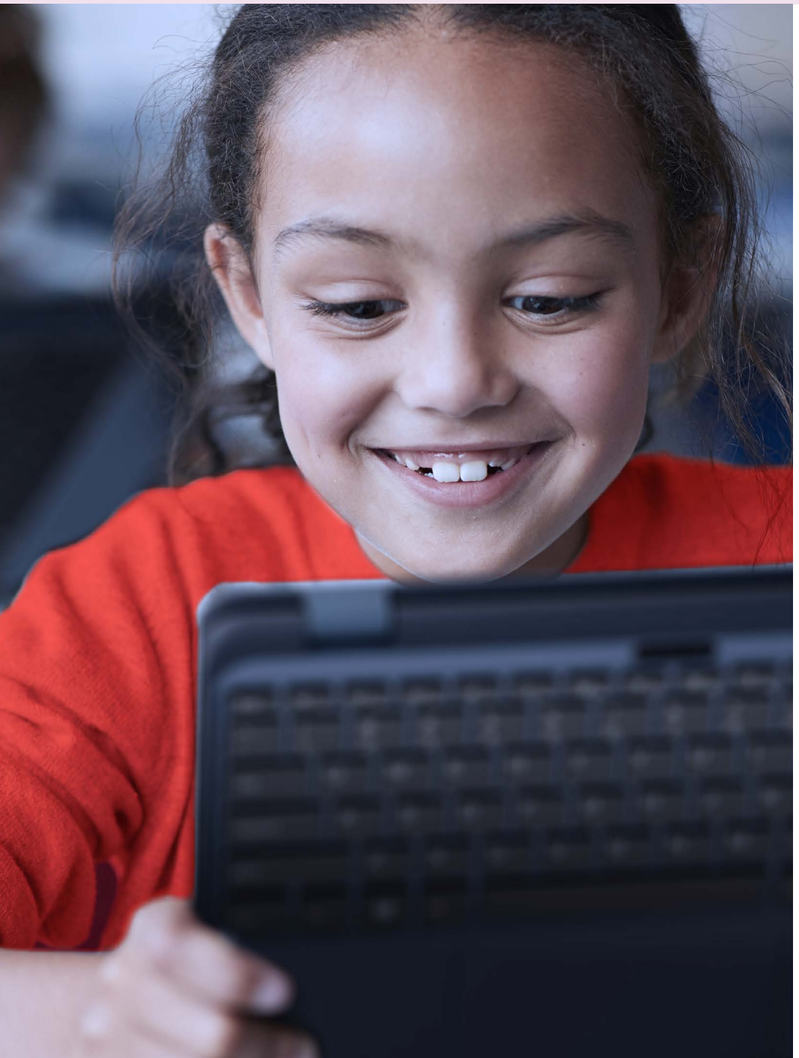
Building a scalable, secure, and sustainable AI architecture requires a holistic, team-based approach that involves key stakeholders, including division leaders, infrastructure, operations, software development, and data science.

In an industry where protecting student privacy and safety is paramount, the human touch is still essential. Lenovo has made Responsible AI practices a priority by combining cutting-edge AI solutions with an emphasis on ethical standards and personalized support.



AI in use today

Take a deeper look into how AI is already being used in K-12 Education, and the many ways Lenovo can help drive new levels of productivity, collaboration and efficiency.



Administrative automation:
Streamline operations, including lesson planning, scheduling, and resource allocation.

Personalized Learning:
Personalize learning experiences to individual needs, with immediate feedback and tailored support.

Content creation and language translation:
Design and generate educational content including presentations, assessments, and study materials based on the curriculum and translated into multiple languages.

Safety and security:
AI-powered surveillance and alert systems improve the safety and security of educational environments.

Predicting Learning Outcomes:
AI can analyze data to predict student performance and identify children at risk of falling behind, enabling early intervention.

Assessment and Feedback:
AI can help teachers evaluate student work faster, assisting feedback in areas such as grammar, coherence, and argument strength.

80% of K-12 teachers use **virtual learning platforms**, at least once a week.[9]

53% of K-12 teachers regularly use chatbots with their students.[9]

Most common uses of **AI in K-12 Education** are to support students with:

51% learning difficulties.[9]

49% create tests and quizzes.[9]

48% adjust lesson content.[9]





Lenovo Solutions for AI in Action

Education organizations are already harnessing the power of Smarter AI for All, here are just a few examples of how Lenovo is helping transform real-world learning and operations.

Strategic technology partner

“For many years, Lenovo has been a strategic technology partner for GOAL. We use the Lenovo ThinkAgile HX Series platform to underpin our digital learning systems.”

Jamie Trujillo - CIO GOAL High School

Learn more

Using AI to raise the bar in special education

“Using AI, we’re already seeing how we can enhance the educational experience of students with SEN, empowering them to reach their full potential.”

Victor Wong - CEO, Bridge AI

Learn more

Lenovo simplifies AI for K-12 Education

Lenovo believes in Smarter AI for All, and our vision is to simplify the adoption of AI and bring AI innovation to everyone through our Hybrid AI model, ensuring AI is delivered seamlessly, responsibly, and securely to personal, enterprise, and public environments across the education sector.

We bring AI to your classrooms, giving you full control, security, and real-time access to data. We also deliver AI solutions at your data centers, providing high performance power, availability, scalability, and seamless cloud integration.

Through our Hybrid AI approach, we bring the right size and mix of AI models, devices, infrastructure, operations, and expertise to your data across personal, enterprise and public environments.

Our AI solutions blend on-premises and cloud-based processing to cater to the unique demands of K-12 Education, providing a broad portfolio of AI-optimized hardware, including powerful servers, racks, and storage solutions. With Lenovo supporting your AI adoption, you can enhance creative learning, improve the student experience and streamline administrative processes.

Our Hybrid AI model brings innovation to everyone

Personal

AI-powered solutions on smart devices like AI PCs predict student and educator needs while keeping data private. We call this **AI for You.**

With Lenovo, AI is:

- **Personalized**: Harness AI capabilities to rapidly analyze student data for personalized learning experiences and improve administrative workflows.
- **Productive**: Transform the learning environment with AI automation, streamlining mundane tasks and accelerating time to insight for intelligent decision-making.
- **Protected**: Strengthen your digital defenses with advanced, predictive security measures, robust threat detection, and cyber-resiliency, safeguarding a secure and efficient digital environment for student data and sensitive information.

Enterprise

Securely and privately develop, fine-tune, deploy and scale AI solutions (AI apps, agents, tools, models) on-premises, using enterprise data, policies, and governance compliance such as FERPA and GDPR, across multiple devices.

- **Innovate:** Accelerate innovation with the industry's leading AI portfolio, delivering rapid insights and optimized learning experiences.
- **Transform:** Transform your life and work with enhanced innovation and productivity through scalable and smart AI solutions, infrastructure, services, and support.
- **Responsible:** Apply Responsible AI principles to your AI adoption ensuring the integration of secure, ethical and sustainable AI solutions.

Public

Leverage cloud AI with personal assistants, chatbots, and open-source frameworks, enhancing innovation, and improving operational efficiency across educational organizations.

- **Custom build, design and delivery**: Develop AI solutions tailored to your needs, boost academic performance, maintain compliance, and help reduce costs for long-term growth and competitive advantage.
- **Safeguard technology excellence**: Make sure your AI systems are robust, reliable, and perform consistently to minimize downtime, reduce errors, and build student and faculty trust.
- **Deliver exceptional learning experiences**: Better-designed, more intuitive AI solutions lead to enhanced user experiences, adoption rates, and greater satisfaction.

The Lenovo AI portfolio

Building a scalable and sustainable AI architecture

Building an AI architecture begins with a technology partner like Lenovo that can bridge cross-industry best practices for compliance, security, and data management while providing devices and infrastructure to meet the unique needs of students, educators and administrators.

Instant AI-driven productivity

Lenovo PCs, workstations, and edge devices include Intel® Core™ Ultra processors and the new Intel® AI-accelerating NPU (Neural Processing Unit) to enhance student learning and educator efficiency at every level. From classrooms to administrative offices, Lenovo's Edge AI servers and devices transform operations across the entire education ecosystem:



of education organizations
already engaged with an external AI partner
were satisfied when doing so.[10]

Lenovo ThinkStation P Series

Powered by Intel® Xeon® Scalable processors

The Lenovo ThinkStation P5 offers extraordinary power and speed, ideal for intensive AI applications.



ThinkStation P5

Lenovo ThinkPad X1 2-in-1

Powered by Intel® Core™ Ultra processors

The ThinkPad X1 2-in-1 Gen 10 Aura Edition combines the versatility of a laptop and a tablet, with AI-driven features that adapt to user preferences and improve efficiency.

ThinkPad X1 2-in-1



Lenovo ThinkPad X9 14 Aura Edition

Powered by Intel® Core™ Ultra processors and Intel vPro®

The Lenovo ThinkPad X9 14 Aura Edition is thoughtfully designed to provide a premium experience, incorporating AI features such as Microsoft Copilot to enhance productivity effortlessly.

ThinkPad X9



Lenovo ThinkEdge

Powered by Intel® Xeon® Platinum processors

Purpose-built platforms for compute-intensive applications deployed outside traditional data centers, with Intel processors for AI acceleration.



ThinkEdge SE350 V2

Lenovo ThinkSystem

Powered by Intel® Xeon® Scalable processors

The SR650a V4 is designed for GPU-intensive AI workloads which enable creative learning and improves administrative processes. Powered by Intel® Xeon® 6 processors, supporting up to 4 double-width Nvidia GPUs, and an astounding 14x PCIe Gen 5 slots, the SR650a V4 server accelerates AI applications in the classroom.



ThinkSystem SR650a V4

Lenovo ThinkAgile

Powered by Intel® Xeon® Scalable processors

Integrated systems offering pre-configured servers, storage, and networking to streamline AI adoption and deployment.



ThinkAgile MX630 V3





Neptune™ Liquid-assisted cooling

With either a thermal transfer module (TTM) or liquid-to-air heat exchanger (L2A), traditional air-cooled systems benefit from liquid cooling with specially designed heat handling, without added plumbing.

Learn more

Trust your AI and data

Lenovo is passionate about responsible AI practices, offering end-to-end protection and support for your Hybrid AI stack.

Our Responsible AI Committee, AI Innovators Program, and flexible Everything-as-a-Service solutions are protected, compliant, and offer a validated ecosystem with the needed expertise and partner solutions.

Skills for Innovation: AI Literacy and Lesson Plans

Lenovo's Skills for Innovation initiative levels up teachers' AI abilities, with training, workshops and lesson plans that help them give K-12 students the education they need for tomorrow's job markets.

Lenovo EdTech Consulting

Lenovo's EdTech Consulting supports educators in getting the right AI tech to meet their goals providing strategic planning and professional development. We deliver on-site, hybrid, and virtual learning to enable educators and administrators to successfully implement meaningful learning experiences.

AI Center of Excellence

The Lenovo AI Center of Excellence (AI CoE) is designed to help you put AI to work for your organizations quickly, cost-effectively and at scale, with solutions that bring AI from ideation to reality. Lenovo makes AI adoption easier for you by providing workshops, proof of concepts, benchmarking, and performance optimization. Together, with our global partner ecosystem, we help reduce time to value and risk. Lenovo has strategically positioned AI data scientists, solution architects, engineers, and industry consortiums worldwide.

Lenovo AI Innovators program

Lenovo has a comprehensive partner strategy that brings together best-in-class Independent Software Vendors (ISVs) for AI software, hardware, and solutions. We have over 50 AI Innovators in the program, providing more than 150 solutions.

In the AI Innovator program, we provide access to our AI Discover Labs and a collaborative platform where partners can develop, deploy and validate their AI solutions with the support of cutting-edge tools, resources and expertise.

- Find specific enterprise AI solutions for Education
- Execute proof of concept and comply with Lenovo's Responsible AI guidelines
- Train your own data without risking confidentiality

Explore the AI Innovators program

Services powered by AI

Lenovo AI Fast Start: Helps you quickly prove the business value of Personal, Enterprise, and Public AI platforms. It provides access to AI assets, experts, and partners to rapidly build a GenAI solution tailored to your organization, ensuring relevance and speeding up large-scale deployment.

Explore AI services

Lenovo TruScale Device as a Service (DaaS): Delivers comprehensive, scalable Smarter AI devices and frees up IT resources with a predictable subscription-based model.

Explore TruScale DaaS

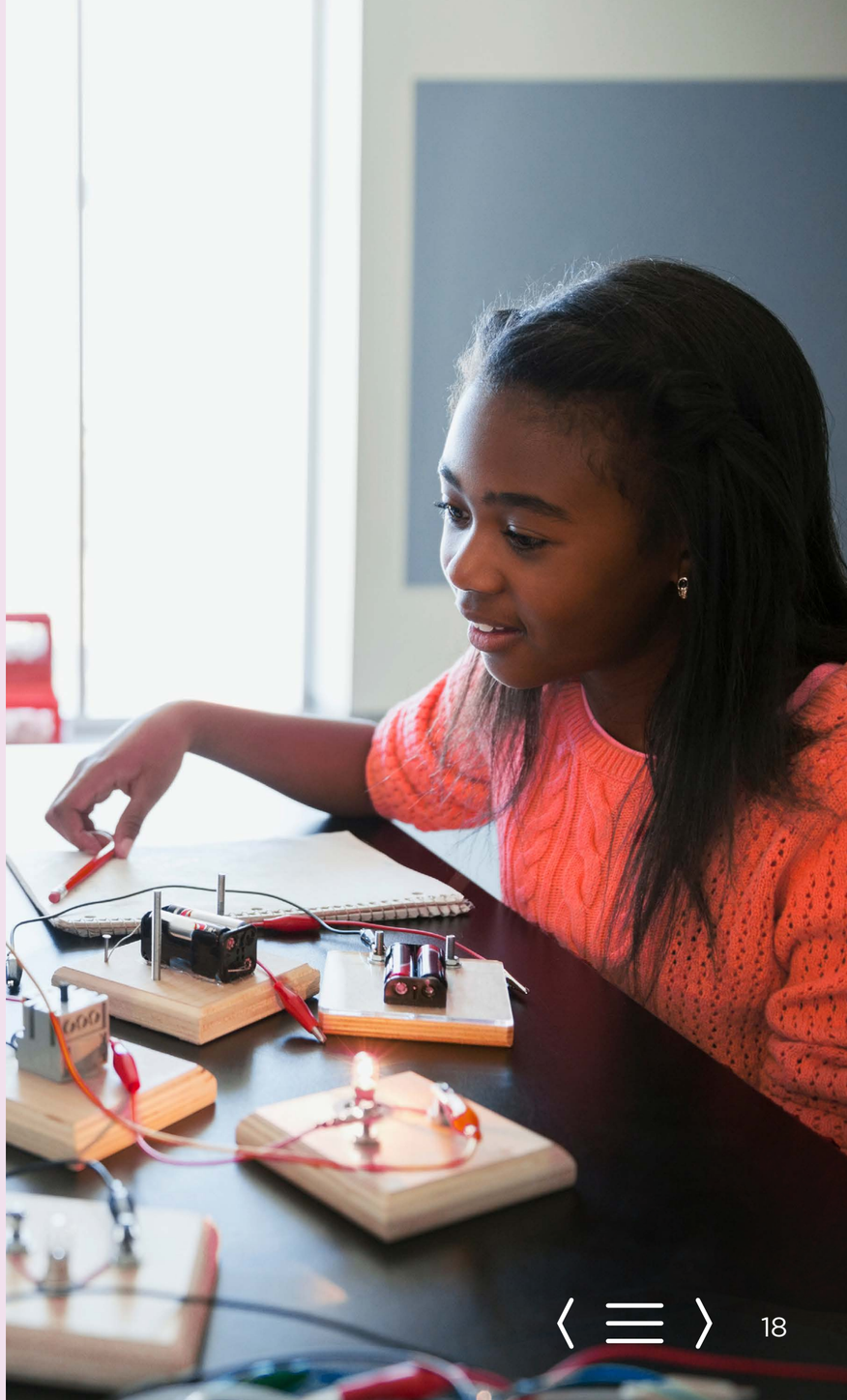
Lenovo Premier Support Plus: Direct access to Lenovo engineers and proactive monitoring to lessen the IT burden on your own staff.

Learn more

Lenovo TruScale Infrastructure as a Service (IaaS): Unlock the advantages of on-premises infrastructure with the flexibility of a cloud-like experience. Lenovo offers tailored solutions for hybrid and multi-cloud environments, infinite storage, and high-performance computing (HPC).

Our new TruScale GPU as a Service boosts HPC with advanced workload orchestration and usage metering, optimizing AI GPU resources for maximum productivity and availability. Combined with Asset Recovery Services, assets can be securely recycled, reused, or repurposed in an environmentally friendly way to maximize value. In an era of rapid advancements in AI and GenAI hardware and software stacks, this flexibility is crucial. Lenovo provides clients with the broadest range of deployment options.

Explore TruScale IaaS



Delivering intelligent sustainability

We understand that what's better for people is also better for business, which is what drives every decision and investment we make.

Lenovo sustainability services include robust offerings to help Education organizations achieve their sustainability goals. Lenovo Asset Recovery Services (ARS) helps unlock value from existing devices through remarketing and responsibly recycling assets with no value. Support services such as Premier Support offer prioritized repairs that help keep devices in use longer. Our innovative Neptune™ Liquid Cooling technology reduces energy consumption by up to 40% supporting more sustainable data centers while addressing the growing concern of AI powered consumption. Lenovo CO_2 Offset Services allows our customers to offset their device's carbon footprint.

We also go further with Lenovo Intelligent Sustainability Solutions Advisor (LISSA) where you can work along with your Lenovo Sales Rep to help unlock estimated emissions reduction opportunities as you deploy IT solutions. All GenAI solutions enabled by Lenovo undergo a responsible AI review including advising customers on how to setup their own responsible AI review and stay compliant.

Top 1%

Lenovo's ranked in the top 1% of EcoVadis-rated companies.[12]

Since 2017, Lenovo has invested more than

$1.7 billion

into AI.[12]



Get started with AI for All

Embarking on your AI journey begins with identifying what your priorities are and focusing on the quick wins that will improve learning outcomes and student engagement.

Lenovo EdTech Consulting can help you achieve this, with planning and professional development that will set you up for success. Together, we can empower teachers to create student-centered learning, with blended and personalized models that foster engagement and inspire achievement.

Full training and lesson planning is available through the Lenovo Skills for Innovation initiative, which is designed to introduce K-12 students to the emerging technologies and future-ready skills they need to thrive in an ever-changing job market.

Choose Lenovo and you have access to all the tools, knowledge, and expert guidance you need for robust and reliable AI adoption in K-12 Education.

Visit **www.lenovo.com/k-12-education**



Why Lenovo?

You can trust Lenovo to empower your educational institution with intelligent technology, driving innovation and growth in a secure and scalable way.

Embrace AI and redefine the future of your organization with intelligent solutions designed to help you drive innovation and enhance learning experiences. From devices and edge computing to infrastructure, servers, storage, and services, Lenovo delivers a complete, sustainable, and secure solution tailored to your needs.

Get a trusted partner. Discover Smarter AI for All and Smarter Education for All.

Contact your Lenovo Account Manager to learn more.

Get started

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Get started with Intel AI for K-12 Education

1 McKinsey, How AI will impact K-12 teachers, 2020
2 HolonIQ 2024 interim survey results, 2024
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6 Crowdstrike, Global Threat Report, 2024
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11 TOP500.org
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