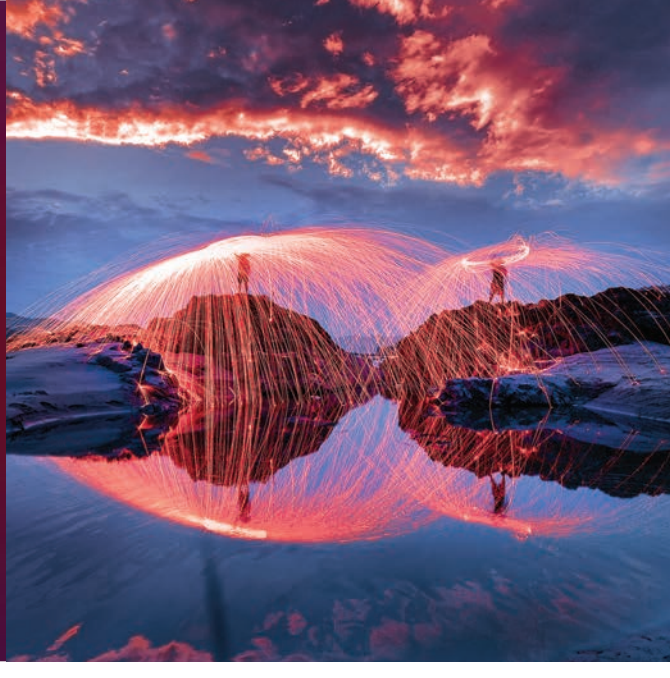
Lenovo | NVIDIA

Edge AI is transforming every industry

Satisfy customers and streamline operations by taking AI everywhere it is needed.



Edge AI solutions help turn challenges into competitive advantages

The challenges faced by every industry:

Delivering exceptional customer experience

75%

of customers expect companies to use new tech to improve experiences.[1]

Companies must create powerful experiences that engage and delight customers.

Optimizing operational performance

30%

improvement achieved in operational efficiency with edge computing.[2]

Organizations must develop and maintain highly productive and cost-effective processes.

Modern business is a balancing act. Organizations must find the margins hidden between delivering exceptional customer experience (CX) and optimizing operational performance. **Edge AI can be a vital component in finding the right balance between these two objectives.**

The best return on investment

$274 billion will be spent on edge solutions in 2025.[3]

150 billion IoT and edge devices will be generating 175 zettabytes of data by 2025.[4]

50% of all new enterprise IT infrastructure investment is now in edge technology.[5]

Organizations investing in edge computing can expect a **23% ROI from edge investments** within the next 3 years, compared with 3% from other tech investments.[6]

Powerful computing, when and where it's needed

Edge AI offers:

1. **Computing power**
   Run complex AI algorithms on small, low-power devices, analyze data, and make real-time decisions.
2. **Processing on-premises**
   Offer an optimized low-latency experience and save money on cloud storage and bandwidth costs.
3. **Reliable storage**
   Reduce the risk of data breach by storing data on local networks or edge devices secured with encryption and firewalls.

Edge AI unlocks:

1. **Performance**
   Increase speed, accuracy and real-time decision making through reducing latency and minimizing unnecessary data transfer.
2. **Resilience**
   Deliver resilience through purpose-built devices and applications that enable redundancy, distributed processing and predictive maintenance.
3. **Security**
   Enhance security through data anonymization, data encryption, threat detection, and local data processing that reduces the volume of data transfers over the cloud.

The benefits of computing at the edge:

Low latency
Brings processing data closer to the source and reduces the time it takes for data analysis and action to improve the user experience.

Increased scalability
Scaling at the edge is more efficient as edge devices often cost less than scaling a centralized data center.

Better network utilization
Improves the performance of existing networks by reducing the data sent to off-site locations.

Improved data security
Helps keep sensitive data within the network, reducing the risk of a data breach.

Cost savings
Reduces the need for expensive infrastructure upgrades, cloud storage, and data center facilities.

Designed for every data-centered industry

How edge AI is improving customer experience across every sector

Edge AI enables:

- Personalized messaging
- Faster check-ins and checkouts
- Enhanced navigation and mobility
- Personalized products and services
- Lower pricing
- Improved service experience
- Accurate diagnoses and treatment planning
- More targeted safety
- Focused resourcing
- Increased product availability

How edge AI is improving organizational operations across every sector

Edge AI enables:

- Sophisticated traffic management
- Efficient energy management
- Effective infrastructure management
- Improved healthcare delivery
- Advanced inventory management
- Enhanced customer service
- Improved fraud detection
- Advanced robotics and automation
- Enhanced security
- Optimization for energy and telco networks

Benefits for every business

Edge AI is disrupting every industry.

Retail, restaurants, and QSRs | Manufacturing | Healthcare | Energy and telecommunications | Smart cities, smart spaces, and smart security

Limitless applications

Retail, restaurants, and QSRs

1. **In-store analytics:** Analyze and act on customer behavior data to improve CX.
2. **Price optimization:** Analyze sales data and adjust pricing for profitability.
3. **Inventory management:** Monitor stock levels, automate inventory ordering, and gather insights for loss prevention and shrink.

Manufacturing

1. **Robotics automation:** Automate repetitive tasks to reduce labor costs.
2. **Fault detection and prevention:** Detect anomalies in production and take corrective action.
3. **Predictive maintenance:** Monitor equipment health and prevent downtime.

Healthcare

1. **Remote patient care:** Monitor vital signs and provide remote consultations.
2. **Medical diagnostics:** Analyze sensor data to detect early illness warning signs.
3. **Drug delivery:** Automate deliveries of critical medications to patients in and out of care.

Energy and telecommunications

1. **Smart grid:** Monitor power usage and optimize electricity distribution.
2. **Network optimization:** Analyze network data to route traffic efficiently.
3. **Real-time alerts:** Provide notifications when power or connectivity issues occur.

Smart cities, smart spaces, and smart security

1. **Traffic management:** Analyze traffic and optimize routes for efficient travel.
2. **Public safety:** Monitor areas for potential threats, such as fires or floods.
3. **Security:** Monitor large areas for intruders or suspicious activity.

[1] Salesforce, 2019, State of the Connected Customer Report Outlines Changing Standards for Customer Engagement
[2] Forbes, 2023, How the Edge is Becoming the Next Frontier of Value Creation
[3] IDC, 2022, New IDC Spending Guide Forecasts Double-Digit Growth for Investments in Edge Computing
[4] Deloitte, 2022, Battle for the Enterprise Edge: Providers prepare to pounce on the emerging enterprise edge computing market
[5] IDC, 2020, Edge Computing: Not All Edges are Created Equal
[6] IBM, 2021, The edge computing advantage

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