Brochure

Vision NXT
Transforming Pixels into Insights

Vision NXT Overview

Vision NXT platform leverages AI-powered vision and deep learning models to identify and extract features from images and solve challenging business use cases. The platform enables systems to interpret, comprehend, and deliver insights based on visual data comprising images and video streams.

The possibilities are limitless across industries such as manufacturing, automobile, healthcare & life sciences, RCPG, and more. The platform provides an end-to-end holistic view of the processes to enable deep insights for improved decision-making by the business.

These insights enable businesses to make improved and better decisions, leading to higher ROI. Vision NXT is a no-code/low-code platform that is completely flexible and configurable in terms of its architecture build.

Applications/use cases of Vision NXT across industries

Manufacturing

- Quality inspection
- Non-Destructive Testing (NDT)
- Safety monitoring and compliance
- Robotic guidance and control

Construction

- Worker safety
- Material monitoring and compliance
- Equipment tracking and monitoring
- Quality assurance inspection

Food and Beverage

- Process quality monitoring (e.g., food grade analysis)
- Counterfeit detection
- Packaging inspection and monitoring
- Inventory planning and management
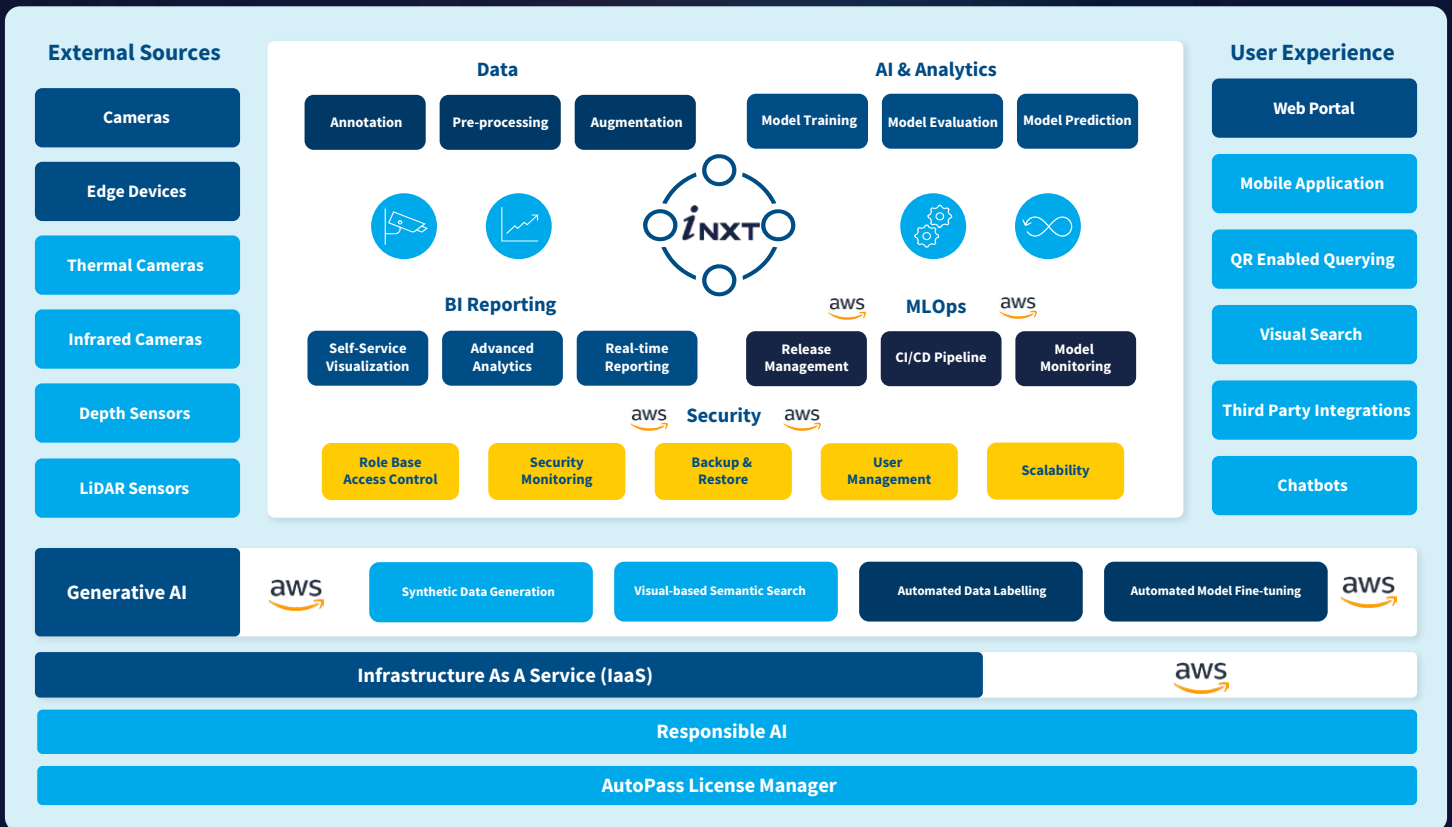
Retail and Consumer Packaged Goods

- Share on shelf
- Label quality inspections
- Product taxonomy & reverse taxonomy
- Image and video tagging for visual search
- Inventory optimization

Automotive

- Automated vehicle inspection system (external + internal)
- Parts inspection
- Automated number plate recognition
- Vehicle safety monitoring
- Vision NXT for service centers

Reference architecture on AWS

LTIMindtree | aws

Vision►NXT

External Sources

- Cameras
- Edge Devices
- Thermal Cameras
- Infrared Cameras
- Depth Sensors
- LiDAR Sensors

Data

- Annotation
- Pre-processing
- Augmentation

iNXT

AI & Analytics

- Model Training
- Model Evaluation
- Model Prediction

BI Reporting

- Self-Service Visualization
- Advanced Analytics
- Real-time Reporting

aws **MLOps** **aws**

- Release Management
- CI/CD Pipeline
- Model Monitoring

aws Security aws

- Role Base Access Control
- Security Monitoring
- Backup & Restore
- User Management
- Scalability

User Experience

- Web Portal
- Mobile Application
- QR Enabled Querying
- Visual Search
- Third Party Integrations
- Chatbots

Generative AI

aws
- Synthetic Data Generation
- Visual-based Semantic Search
- Automated Data Labelling
- Automated Model Fine-tuning
aws

Infrastructure As A Service (IaaS) — **aws**

Responsible AI

AutoPass License Manager

Technical benefits of Vision NXT

- Support for Edge Analytics and Tiny Models

- Ability to choose from more than 15+ algorithms

- Multiple data source connectors and integration support

- No-code/low-code layer empowering business users to build, train, and deploy vision models

Business benefits

25+ pre-trained models with accuracy above **70%**

Modular and reusable architecture leading to a **1/5th** reduction in time and **1/3rd** reduction in resource cost to build a use case

Enabling improved and efficient decision-making for businesses with analytical dashboards

Self-service interface leading to higher flexibility and adaptability in terms of any change in processes or business requirements

Key features

End-to-end capability from Data Discovery to Dashboard

Multiple model compatibility–on cloud and Edge Support

Support for customizations and configurations

No-code/ low-code

Advanced analytical reporting

LTIMindtree