

# AI can Make The World a Better Place

Konan Technology will take a step forward



## Video AI

### Konan Vision AI - Indoor SAR (1/2)

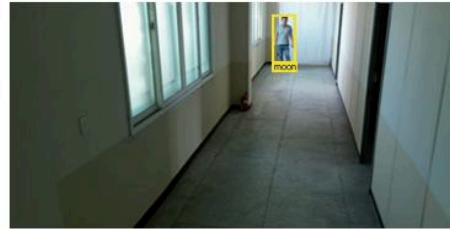
Konan Vision AI enables real-time person detection and recognition at the edge.



Poor Lighting



Motion Blurring



Far Distance



Pose Variation

- Supports multi-vision tasks simultaneously in real time on the Jetson series.
- This cutting-edge technology provides highly accurate person and face recognition in various surveillance scenarios such as CCTV systems, UAVs and delivery robots.
- Our technologies can help to quickly identify victims and survivors of indoor disasters and terrorist attacks.

## Video AI

### Konan Vision AI - Indoor SAR (2/2)

Indoor SAR offers highly accurate person and face recognition in diverse surveillance scenarios, including CCTV systems, UAVs, and delivery robots.

**Search and Rescue for missing persons**

### Konan Vision AI - indoor SAR

Person & Head Detection

Face Recognition

Person & Head Tracking

Face & Landmark Detection

Person Re-Identification

Face Quality Assessment

NVIDIA Jetson Device



**Indoor Disaster beyond Reach**

## Video AI

### Konan Vision AI - Outdoor SAR (1/2)

Konan Vision AI enables real-time person detection and recognition at the edge.



**Person Detection Under Challenging Conditions**

- With small-object-optimized networks and schemes, our system achieves robust high-altitude object detection.
- Under challenging conditions, including inclement weather, our video object identification technology ensures stable and reliable performance.
- Adaptive Object Data Association effectively extracts object features in camera blur situations, thus reducing ID missing.
- The enlarged Adaptive Object Data Association algorithm maintains stable object tracking performance even when frame drops occur.

# Technology

## Video AI

### Konan Vision AI - Outdoor SAR (2/2)

Outdoor SAR achieves robust high-altitude object detection with small-object-optimized networks and schemes.

Search and Rescue for missing persons

### Konan Vision AI - outdoor SAR



Edge Device



Widespread outdoor disaster

## Digital Twin

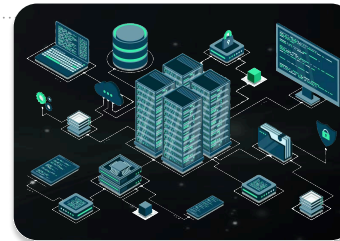
### Data-Centric AI Maintenance, Konan PHM (1/2)

Konan PHM is a digital twin-based AI predictive maintenance solution. It enhances the accuracy of fault diagnosis and remaining life prediction for components/equipment in the aerospace, defense, and manufacturing industries, supporting optimal decision-making.

#### Overcoming Data Limitations

**Field issue** Lack of failure data and labeling data.

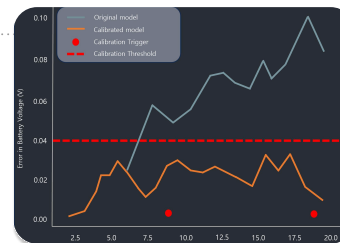
**Solution** The innovative combination of technologies such as Physics-informed Neural Networks, Self-supervised Learning, and Domain Adaptation enables robust fault detection and diagnosis even with limited failure data.



#### Sustained Performance

**Field issue** Performance decline of initial prediction models due to aging of components or systems.

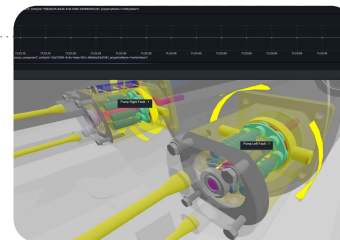
**Solution** Data-Driven Model Evolution: Continuous Learning and Model Updating for Optimal Performance.



#### Real-time Simulation for Immediate Insights

**Field issue** Simulation Latency at the operational phase.

**Solution** Enabling Real-time Simulation with Neural Operator technology. Our data-driven simulation solution empowers Faster Decision-making.

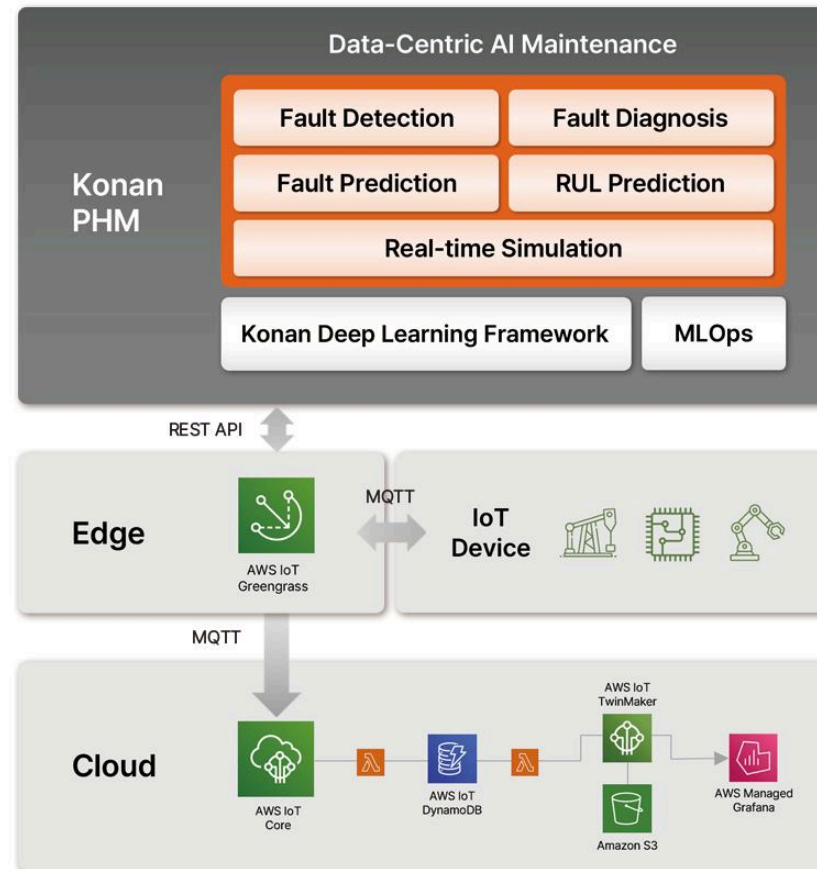


# Technology

## Digital Twin

### Data-Centric AI Maintenance, Konan PHM (2/2)

Konan PHM is a digital twin-based AI predictive maintenance solution. It enhances the accuracy of fault diagnosis and remaining life prediction for components/equipment in the aerospace, defense, and manufacturing industries, supporting optimal decision-making.



# Technology

## Digital Twin

### AI pilot features

A digital twin technology that implements drone autonomous driving and unmanned flight training using reinforcement learning

#### Unmanned flight training using reinforcement learning, 'Konan AI Pilot'



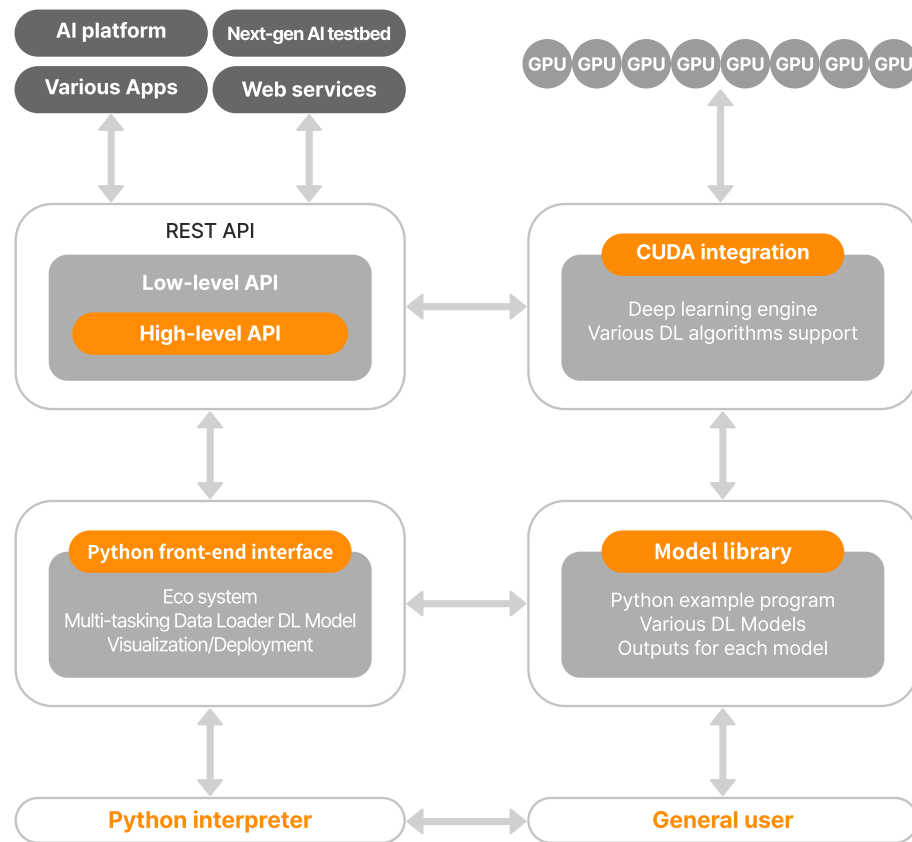


# Technology

## Deep Learning Framework

### DL Framework Architecture

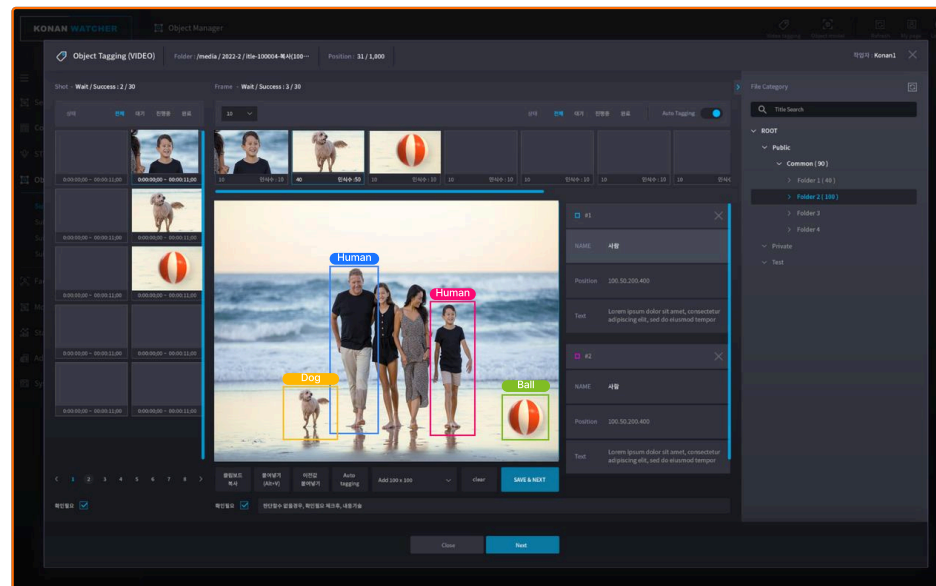
A flexible Deep Learning Framework that is easy to use for developers across a wide range of industries.



## Video AI

### Storyboard generation by Konan Watcher

Vision AI solution composed of Video Scene and Object detection, Timeline based storyboard generation for intuitive video editing

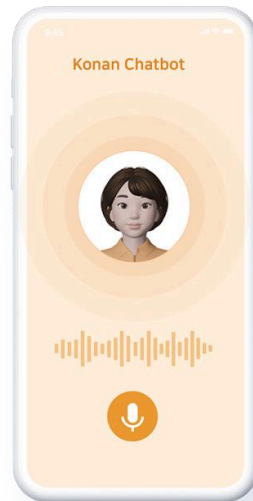


# Technology

## Text AI

### STT+NLU+TTS on Chatbot

"Conversational agent" technology that listens, understands, and speaks natural language like a human



“ Let me know the **company location** ”

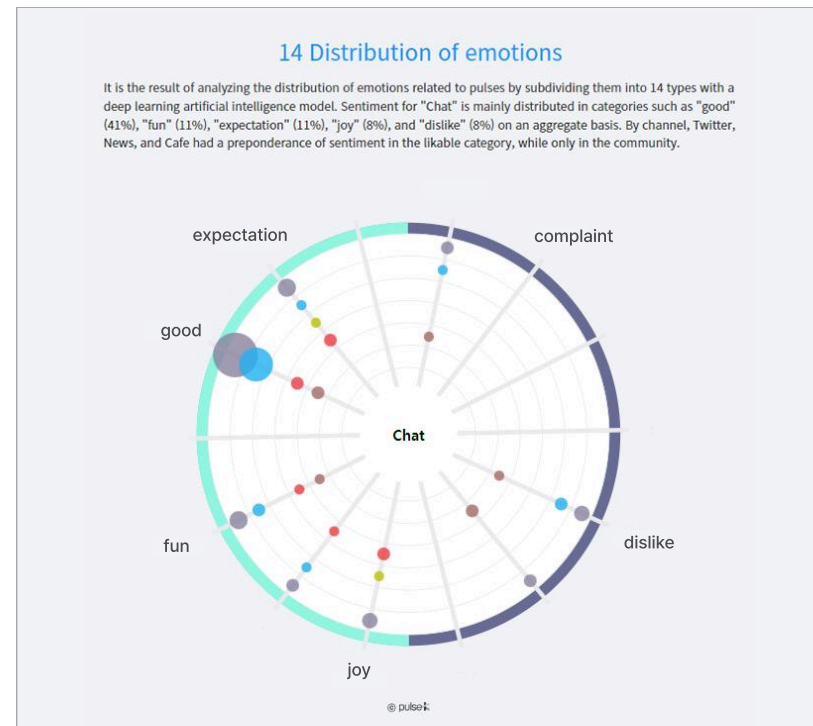
“ **Where** is the **company** ? ”

“ Tell me the **company transportation** ”

## Text AI

### NLG by pulse K

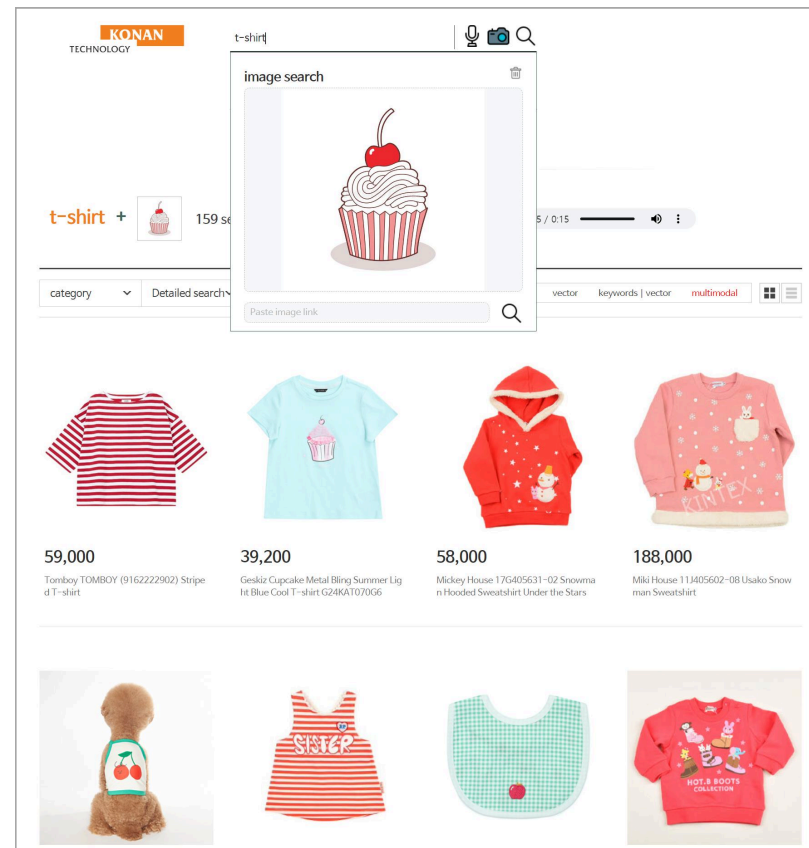
"NLG(Natural Language Generation)" technology applied to a billion-scale unstructured social data analysis service



## Text AI

### Multi-modal search

"AI-based Multi-modal search" technology that understands the user's situation and intentions



## Company Overview

Konan Technology is an AI software company. Established in 1999, Konan Technology focuses on unstructured big data analysis technology for over 25 years.

Company Name **Konan Technology Inc.**

CEO **Young Sum Kim**

Date of Establishment **April 1999**

Core Technologies **Text AI, Video AI, Digital Twin**

Key Products **Konan LLM, Konan Search/Analytics/Chatbot, Konan Watcher, Konan Voice, PHM, AI Pilot**

No. of Employees **223**

Address **327, Gangnam-daero, Seocho-gu, Seoul**

Corporate Type **KOSDAQ-Listed Company**

# Customer

Based on the accumulated consumer trust for over 25 years, Konan Technology has secured more than 2,900 customers ranging from large corporations such as Hyundai Motor Company, Samsung Electronics, and SK Telecom to public institutions.

2,900

Customers

3,400

Projects

Enterprise



# Customers

Based on the accumulated consumer trust for over 25 years, Konan Technology has secured more than 2,500 customers ranging from large corporations such as Hyundai Motor Company, Samsung Electronics, and SK Telecom to public institutions.

## Public Institution



## Finance



## Commerce





# Customers

Based on the accumulated consumer trust for over 25 years, Konan Technology has secured more than 2,500 customers ranging from large corporations such as Hyundai Motor Company, Samsung Electronics, and SK Telecom to public institutions.

## Media



## Education



## Company History

For the past 20 years, we have built a strong technology foundation in the unstructured data analysis field. For the upcoming 10 years, we will write history as an leading AI company related to image, voice and text.

- 2025** Co-developed Korea's first LLM-based clinical platform with Hallym University Medical Center  
Selected as an 'Emerging AI+X Top 100 Company' for 4 consecutive years
- 2024** Contract 'Generation AI Project' with Korea Southern Power Corporation  
Honored with the Minister's Prize at the Korea AI Industry Awards
- 2023** Selected as 「Defense Innovative Company 100」  
Completion of the 'Defense Intelligent Platform' project for R.O.K MND  
Released document generation AI, 'Konan LLM'
- 2022** Konan Technology (402030) listed on KOSDAQ  
Business agreement with 'KAI' to strengthen AI-based aerospace technology
- 2017** Started applying AI technology to commercial products
- 2009** Provide video-search technology for Nate Portal
- 2007** Provide integrated search services for Nate Portal and Cyworld
- 2006** Business alliance with SK Communications established
- 2005** Overseas incorporated company Konan Digital Inc. established
- 2004** Launched SBS Digital News based on 'Konan DigitalArc'
- 2001** Konan image-searching technology selected as MPEG7 international standard
- 1999** Konan Technology established

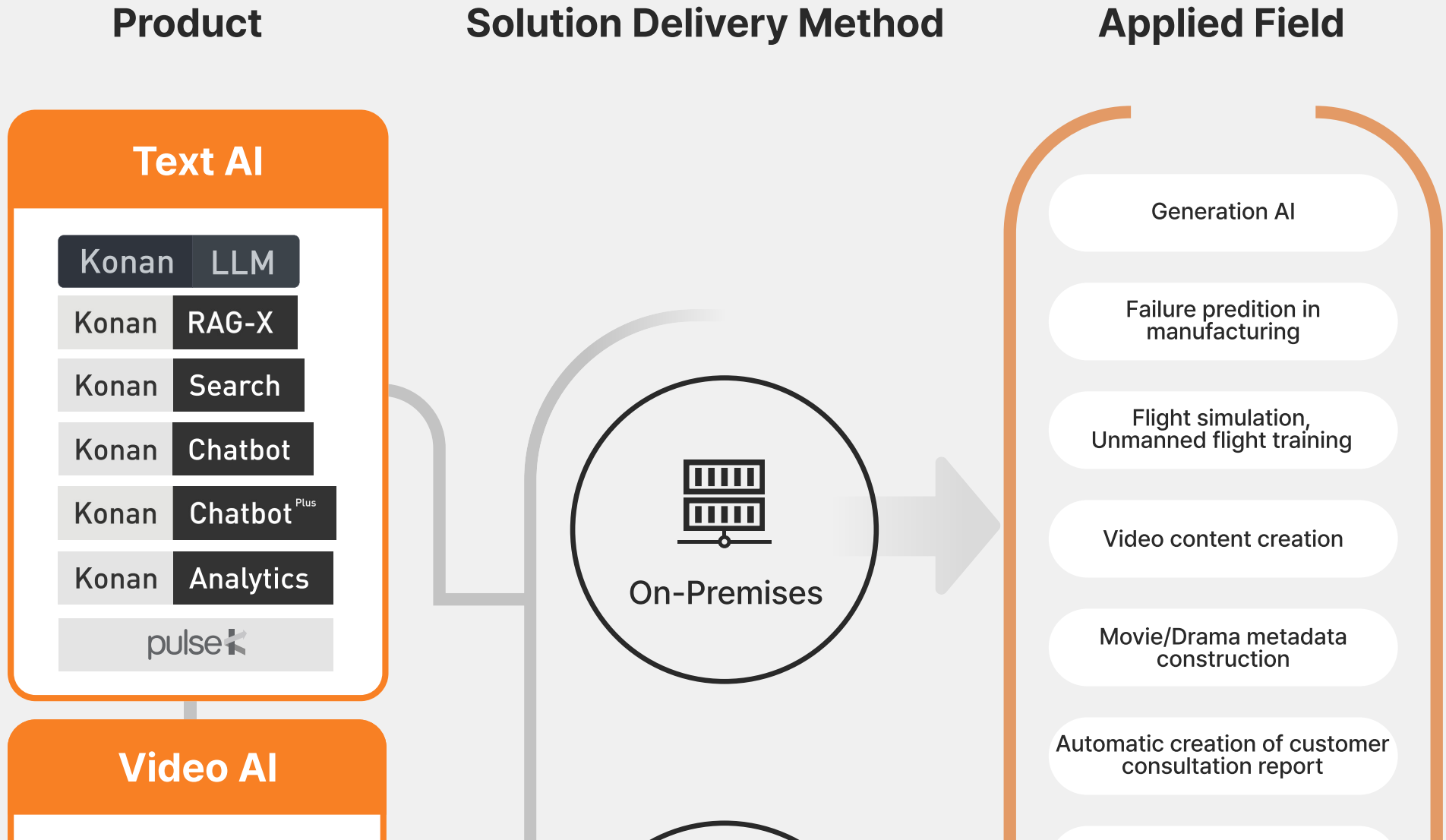
# Vision

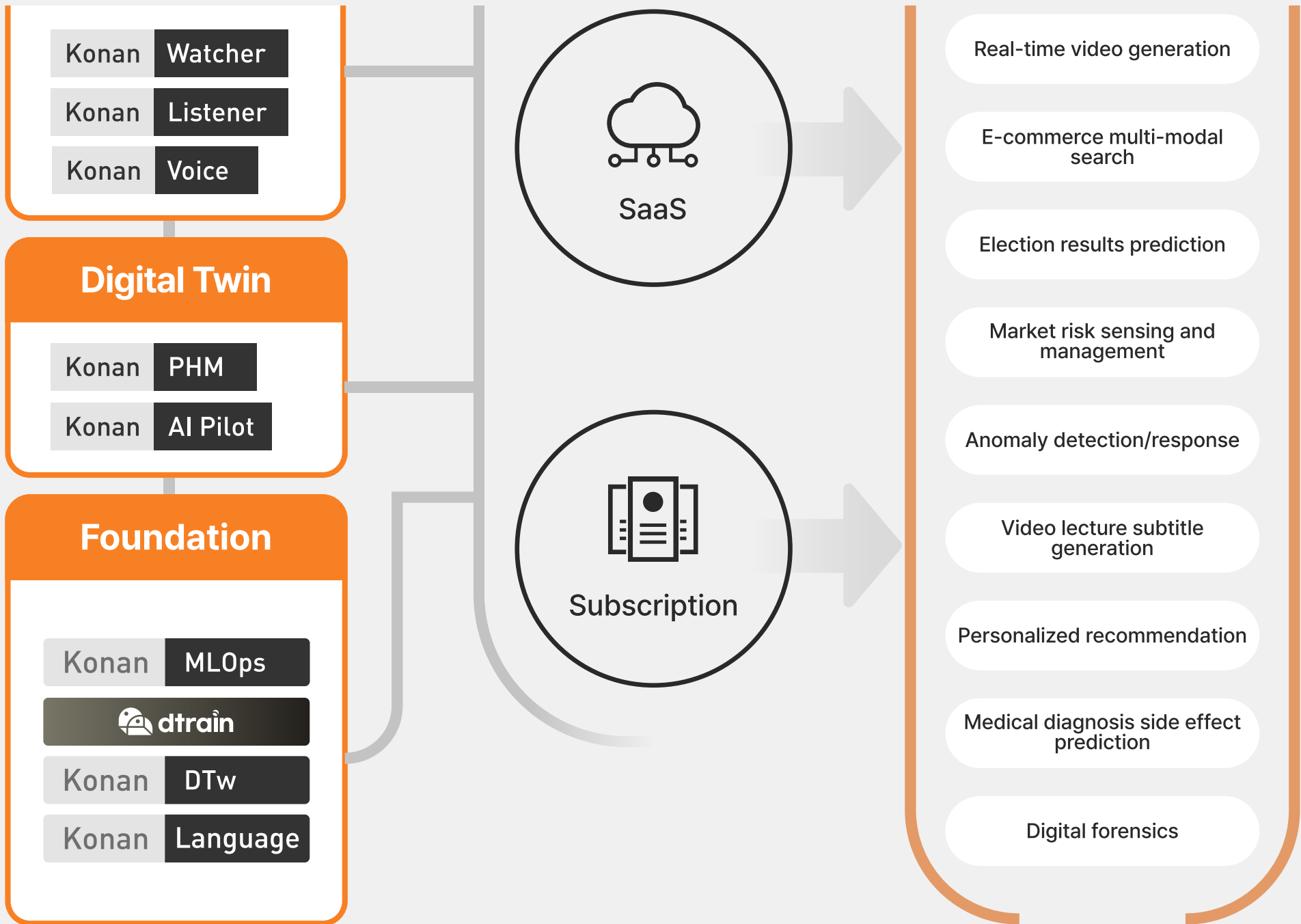
Our AI technologies empower enterprises to make faster, better decisions.



# Business Information

Konan Technology focuses on technology commercialization to develop AI that 'watch, listen, understand, and speak' like human-beings do.





# Featured Products

## Text AI

To understand the intention of the speaker.

### Konan LLM

**Konan LLM** is an on-premise 'Document Generation AI' for B2B/B2G. It boasts Korean document generation having the largest number of Korean tokens. Also, it provides accurate and well-founded answers through self-developed Vector Search engine-based RAG.

### Konan RAG-X

**Konan RAG-X** is an advanced RAG solution powered by generative AI, delivering high-quality search services and personalized information. By integrating with the Conan LLM, it generates contextually accurate and refined answers through Retrieval-Augmented Generation (RAG) technology.

### Konan Search

**Konan Search** is an "AI-based multimodal search engine" that understands the user's situation and intentions. You can search by taking a picture without typing, and you can search for synonyms / similar expressions by vector search without using a synonym dictionary.

### Konan Chatbot

**Konan Chatbot** is an AI-based conversational agent that upgrades businesses by providing high quality conversational services. It provides conversational services that are based on natural language understanding, text mining, machine learning, and deep learning technologies.

### Konan Chatbot Plus

**Konan Chatbot Plus** is an AI-based translation service that allows real-time conversations in various languages. It provides more natural communication with foreigners in their native language through high-quality speech recognition and machine translation technology.

### Konan Analytics

**Konan Analytics** is an 'intelligent text analytic engine' that discovers business insights through structured and unstructured data analysis using machine learning, AI, and data science based technologies.

### pulseK

**pulse-K** is a real-time analytic service that analyzes current online issues and finds business signals using AI-based data science technology.

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## Video AI

Recognize objects in video, such as people, faces, voices, and situations, to understand the context of video scene.

### Konan **Watcher**

**Konan Watcher** is a solution that can identify various multimodals such as faces, entities, situations and scenes in video contents and can be applied to public, broadcasting, and national defense fields.

### Konan **Listener**

**Konan Listener** is an end-to-end voice recognition engine solution that automatically generates subtitles from various video contents by combining and utilizing technologies such as video processing, natural language processing etc.

### Konan **Voice**

**Konan Voice** is '3D Character-Integrated Text-to-Speech (TTS) service' for B2B/B2C. It automatically lip-syncs and dubs a 3D character with just the script text. Additionally, it can express 6 emotions and provides natural high-quality sound with a MOS of over 4.5.

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## Digital Twin

System diagnosis, prediction, and optimal decision-making by PBDL and RL with digital twins.

### Konan **PHM**

**Konan PHM** can have a dramatic impact on manufacturing operations by PBDL and RL with digital twins.

### Konan **AI Pilot**

**Konan AI Pilot** implements drone autonomous driving and unmanned flight training using reinforcement learning.

## Leadership



### Youngsum Kim CEO

Ph.D. in electrical and communications engineering, Hanyang University  
Senior Researcher, ETRI  
Bellcore Research from U.S.A

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Youngsum Kim, he has been asked his top business priorities, he always replies "Our people are our top competitive advantage."

Under this management philosophy, he has built a strong organizational culture based on autonomy.

And he has focused on artificial intelligence business development that encompasses image, voice and text from its inception to the present.



### Seunghyun Yang CTO

Ph.D. in Computer Science, Seoul National University  
Senior Researcher, ETRI  
IBM Natural Language Processing Researcher, Seoul National University  
SKT CTO concurrently

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Seunghyun Yang has directed the company's technology innovation based on the principle of creating well-made products that are minimalistic and faithful to the basic function of the product.

As a result, It has become the only AI software company in Korea that uses its own 'K-language' as its source code and trains AI models with its own deep learning framework.



## Leadership



### **Deokho Yoon** Vice President/ Director of Vision AI Research Institute

Ph.D. in Computer Science, Seoul National University  
Professor, Hannam University

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Deokho Yoon is in charge of developing a flexible deep learning framework for next-generation AI research and development. Additionally, he had led the development of ""SBS Digital Newsroom System"" that adopted a digital TV news production system for the first time in South Korea.



### **Seungki Kim** Vice President / Head of Business Operations

CEO, Ssangyong Information & Communications  
Executive Director and Research Center Head, Osstem Implant

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Seungki Kim is an IT industry veteran with over 35 years of expertise in IT and business management. He served as the CEO of Ssangyong Information & Communications and as the Head of the Software Product Research Center at Osstem Implant.

## Leadership



### **Youngchang Song** CFO

Bachelor of Laws, Seoul National University  
KTB, Heungkuk Life Insurance

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Youngchang Song has a background in excellent investment management and has over 29 years of experience in the financial field.

Before joining Konan Technology, he was in charge of investment management at KTB Network and management planning at Heungkuk Life.



### **Jungju Choi** Executive Director

Ph.D. in Computer Science, Postech  
Professor, Department of Media at Ajou University  
Senior Researcher, ETRI  
Academic Chairperson, Korea Computer Graphics Society

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Jungju Choi is the head of research and development for digital twin and metaverse technologies. He has a number of research achievements and publications in computer graphics, such as standardization of '3D digital human models' and 'Haptic rendering to improve immersion'.

## Leadership



### **Wantaek Lim** Managing Director

Bachelor of Computer Science and Statistics, Seoul National University  
Head of Mobile Division, KTH  
Senior Invited Researcher , KISTI

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Wantaek Lim is a strategic planning expert with over 10 years of experience. Prior to joining Konan Technology, he was in charge of the mobile businesses such as Pudding Camera, Pudding Face Recognition service, location-based SNS service "I'm in", at KTH.



### **Wonchul Do** Managing Director

Master of Computer Science, Hongik University  
General Director of Technology, Handysoft corp.

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Wonchul Do is head of research and development for LLM and chatbot. Prior to joining Konan Technology, he was head of developing collaboration software such as Groupware, BPM(Business Process Management System) and KMS(Knowledge Management System) at Handysoft corp.

## Leadership



**Changmin Oh** Managing Director

M.S. in Computer Science, Seoul National University  
SW Engineer, Empas, Inc.

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Changmin Oh leads a group focused on developing the company's search/analytics products and researching LLM training and optimization. He is particularly interested in designing search systems, ranging from edge devices to large-scale systems handling billions of records.



**Hyunmin Lee** Director

M.D. in Computer Science, Chonnam National University  
Senior Researcher, A-Lab

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Hyunmin Lee conducted Nate Semantic Search project leveraging her expertise in NLP technologies. She also developed Konan Analytics, a product for unstructured text analysis. Currently, she is managing pulseK, an online media analysis service based on real-time data collection and analysis.

## Leadership



### **Youngjoo Suh** Managing Director

Ph.D. in Information and Communications Engineering, KAIST  
Associate Research Professor, KAIST  
Researcher, ETRI

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Youngjoo Suh is the head of the Voice Group. He has been actively conducting R&D in the field of Speech AI, with a primary focus on speech recognition and speech synthesis, in both academia and industry for over 30 years. He has published dozens of papers, including 'Probabilistic Class Histogram Equalization Based on Posterior Mean Estimation for Robust Speech Recognition' in IEEE Signal Processing Letters.



### **Mansoo Kim** Managing Director

M.S. in Computer Science, Kyungpook National University  
Managing Director, Cognent9  
Primary Co-founder, DigitalAria  
Researcher, ETRI

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Mansoo Kim is leading the Digital Twin Group. The Digital Twin Group is engaged in research and development of equipment health prediction and autonomous flight technology for UAVs in the manufacturing, aerospace, and defense sectors. He has recently become interested in developing technologies that integrate digital twin and artificial intelligence.

## Leadership



**Minho Ahn** Director

Ph.D in applied mathematics from Pohang University of Science & Technology  
Managing Director, Creverse Inc.  
Technical Director, Unity Technologies Inc.

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Minho Ahn is leading the development of AI Pilot, a critical component for next-generation air forces. His research focuses on creating intelligent agents that enhance human strategic decision-making under information constraints, utilizing advanced reinforcement learning techniques and linguistic geometry. Additionally, he developed FXUI, a vector graphics-based embedded GUI solution currently deployed in over 100 million devices.

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**Hyunsu Kang** Director

Master of Computer Science and Statistics, Chunbuk National University  
Systran(Korea) Development Group Leader

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Hyunsu Kang has a lot of experience in natural language processing. Recently, he has been applying object recognition technology and reinforcement learning technology using drones to the defense field.

## Leadership



### **Hansang Cho** Director

M.S. in Mathematics, Postech  
Former Research Director of AI Lab, Cognet9  
Former Research Director of Computer Vision Lab, Zenitum

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Hansang Cho is a Computer vision engineer with over 20 years of experience. He is responsible for developing Computer vision and MLOps solutions. Additionally, he has a strong interest in AI infrastructure, recognizing its critical role in supporting AI applications.