

# Al can Make The World a Better Place

Konan Technology will take a step forward



### Video Al

#### 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.
- $\cdot$  Our technologies can help to quickly identify victims and survivors of indoor disasters and terrorist attacks.

### Video Al

#### 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



### Video Al

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** 

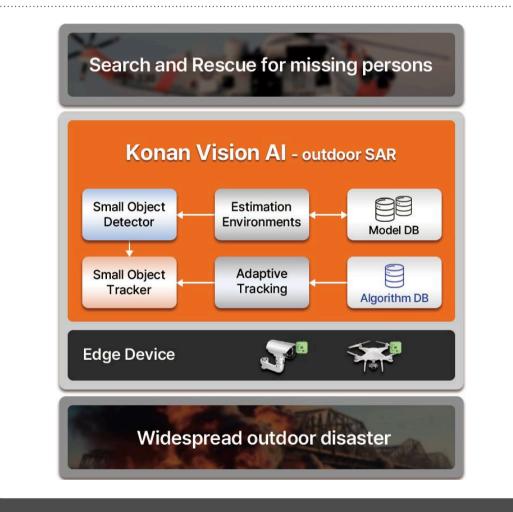
 $\cdot$  With small-object-optimized networks and schemes, our system achieves robust high-altitude object detection.

- 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.

### Video Al

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

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



### **Digital Twin**

#### Data-Centric Al 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.



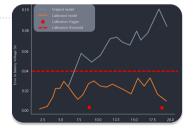
#### Sustained Performance



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



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

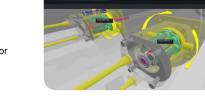


#### Real-time Simulation for Immediate Insights

Field issue Simulation Latency at the operational phase.

empowers Faster Decision-making.

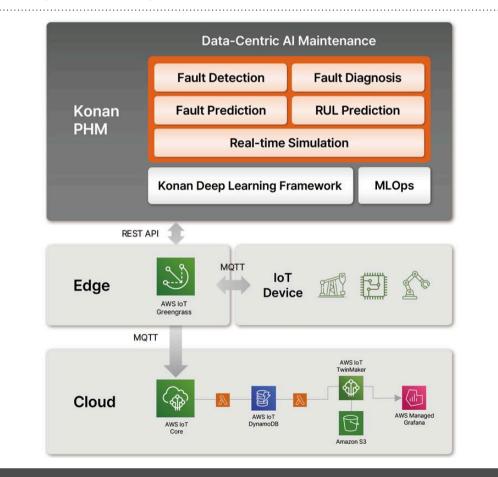
Enabling Real-time Simulation with Neural Operator Solution technology. Our data-driven simulation solution



### **Digital Twin**

#### Data-Centric Al 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.

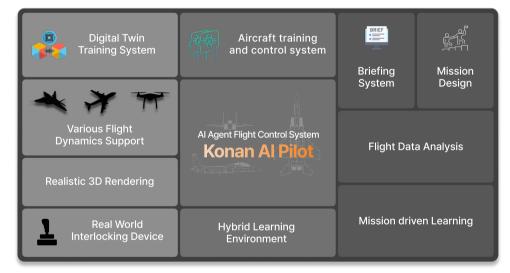


### **Digital Twin**

#### Al pilot features

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

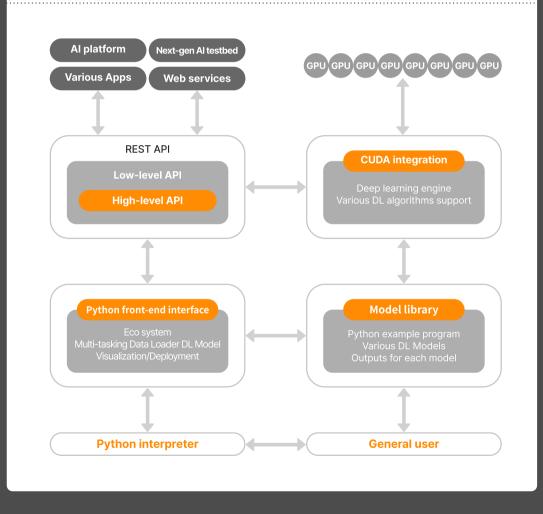
Unmanned flight training using reinforcement learning, 'Konan Al Pilot'



### **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 Al

#### Storyboard generation by Konan Watcher

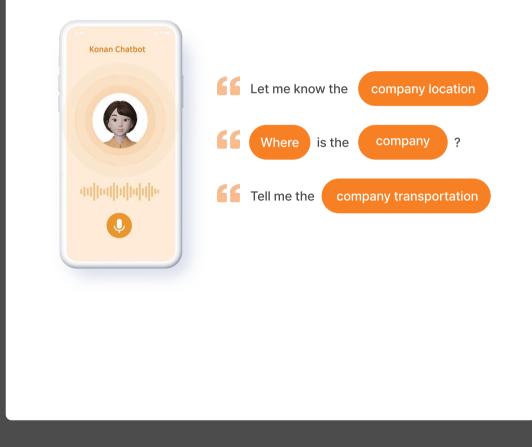
Vision Al solution composed of Video Scene and Object detection, Timeline based storyboard generation for intuitive video editing



### **Text Al**

#### STT+NLU+TTS on Chatbot

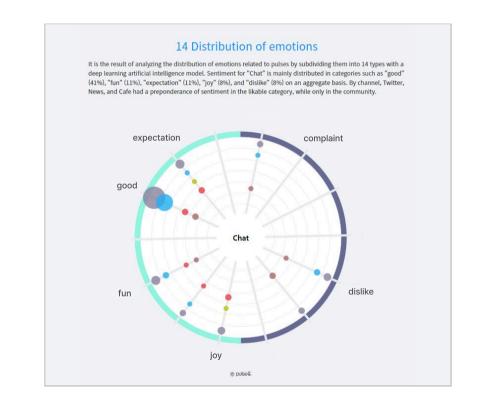
"Conversational agent" technology that listens, understands, and speaks natural language like a human



### **Text Al**

#### NLG by pulse K

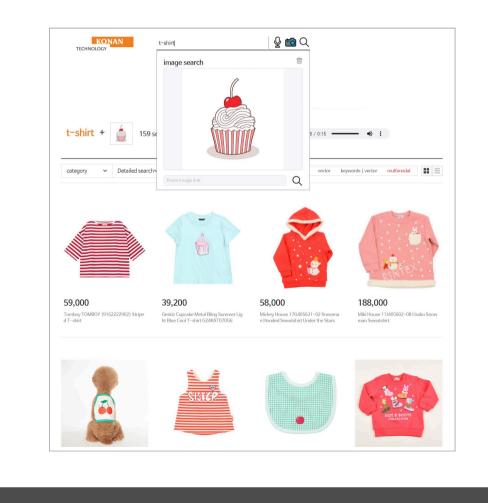
"NLG(Natural Language Generation)" technology applied to a billion-scale unstructured social data analysis service



### **Text Al**

#### Multi-modal search

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

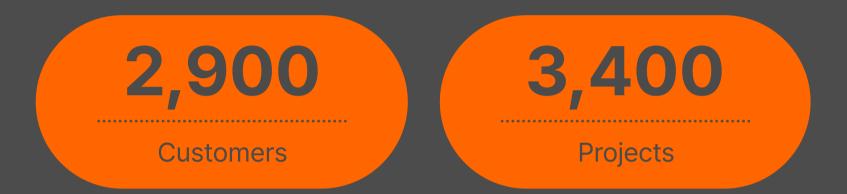


Company<br/>OverviewKonan Technology is an AI software company. Established in 1999, Konan Technology focuses on unstructured big<br/>data analysis technology for over 25 years.

Company Name	Konan Technology Inc.
CEO	Young Sum Kim
Date of Establishment	April 1999
Core Technologies	Text Al, Video Al, Digital Twin
Key Products	Konan LLM, Konan Search/Analytics/Chatbot, Konan Watcher, Konan Voice, PHM, Al Pilot
No. of Employees	223
Address	327, Gangnam-daero, Seocho-gu, Seoul
Corporate Type	KOSDAQ-Listed Company

### Customer

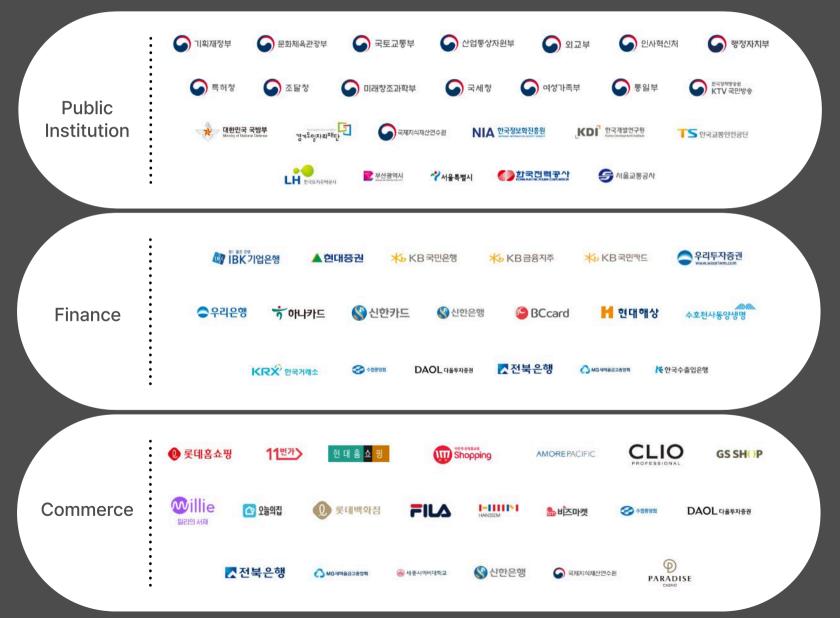
Based on the accumulated consumer trust for over 25 years, Konan Technology has secured more than 2,900 customers ranging from large corporations such as Hyundai Motor Company, Samsung Electronics, and SK Telecom to public institutions.





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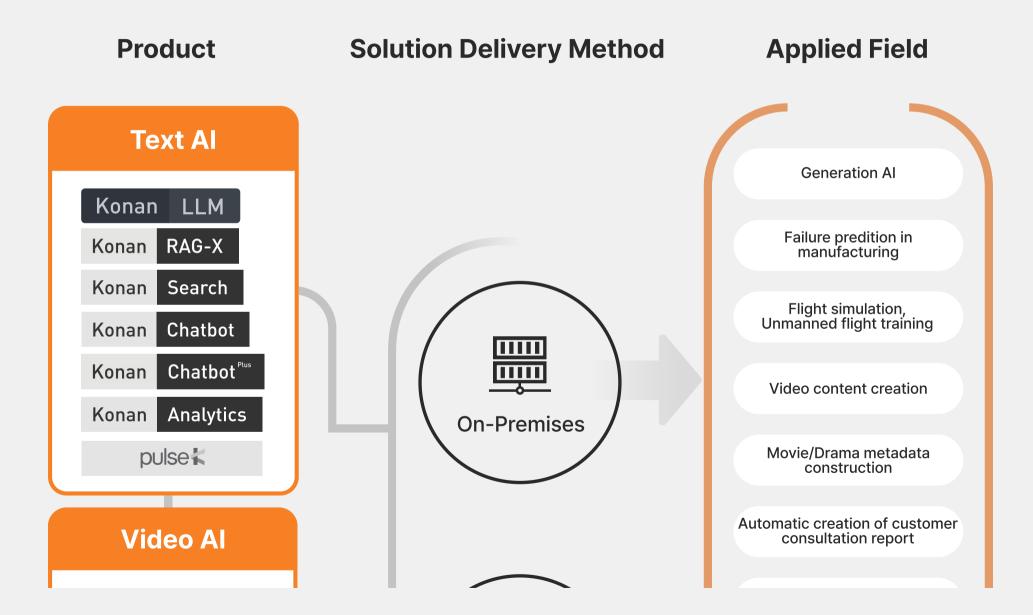
Company History	For the past 20 years, we have built a strong technology foundation in the unstructured data analysis field. For the upcoming 10 years, we will write history as an leading AI company related to image, voice and text.	è
2025	Co-developed Korea's first LLM-based clinical platform with	
	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 Al Industry Awards	
2023	Selected as <sup>r</sup> 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	

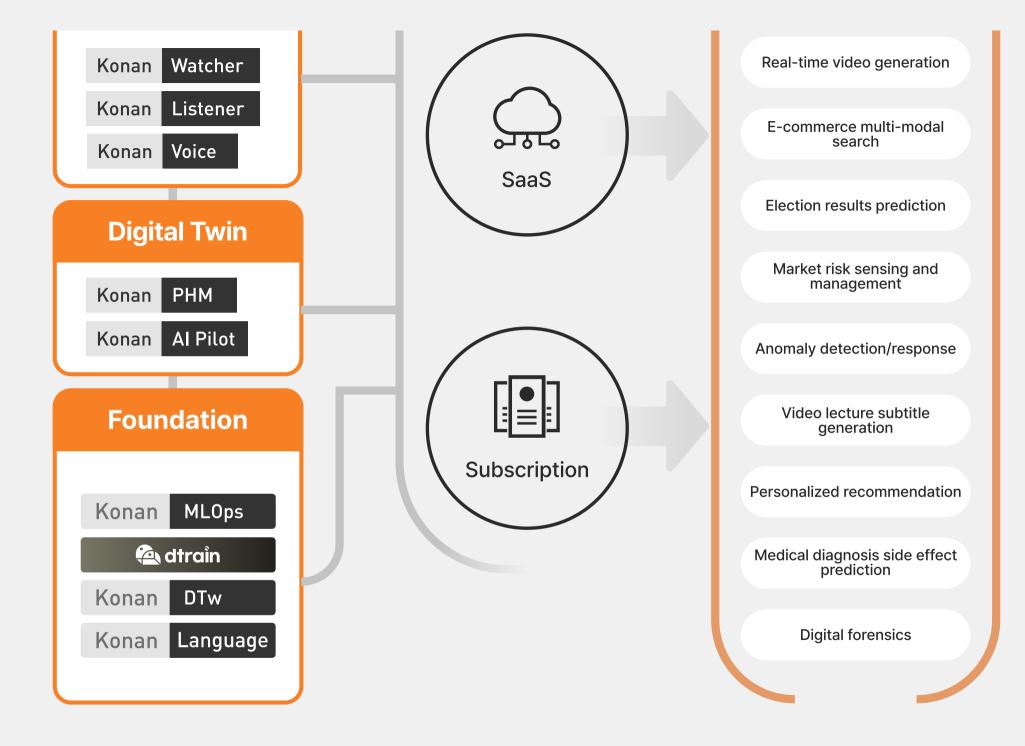
Vision

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



Business<br/>InformationKonan Technology focuses on technology commercialization to develop AI that 'watch, listen, understand, and<br/>speak' like human-beings do.





### **Featured Products**

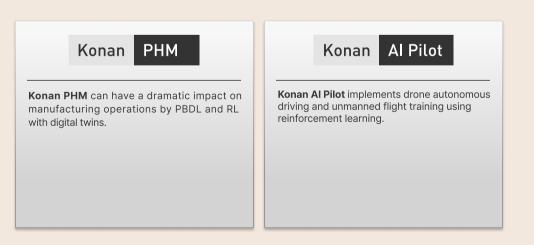
#### **Text Al** To understand the intention of the speaker. Konan LLM RAG-X Konan Search Konan Chatbot Konan Konan LLM is an on-premise 'Document **Konan RAG-X** is a high-performance Konan Search is an "Al-based multimodal Konan Chatbot is an Al-based conversational Generation Al' for B2B/B2G. It boasts Korean search engine" that understands the user's agent that upgrades businesses by providing Retrieval-Augmented Generation (RAG) document generation having the largest situation and intentions. You can search by high quality conversational services. solution developed based on Konan number of Korean tokens. Also, it provides taking a picture without typing, and you It provides conversational services that are based Technology's decades of expertise in search accurate and well-founded answers through can search for synonyms /similar on natural language understanding, text mining, technology and advanced vector search expressions by vector search without using a self-developed Vector Search engine-based machine learning, and deep learning technologies. capabilities. It delivers fast and reliable RAG. synonym dictionary. answers by securely leveraging internal corporate assets while seamlessly connecting to vast external knowledge sources. Chatbot<sup>™</sup> Konan Analytics Konan pulse K Konan Analytics is an 'intelligent text analytic Konan Chatbot Plus is an Al-based pulse-K is a real-time analytic service that translation service that allows real-time engine' that discovers business insights analyzes current online issues and finds through structured and unstructured data conversations in various languages. It business signals using AI-based data science analysis using machine learning, Al, and data provides more natural communication with technology. foreigners in their native language through science based technologies. high-quality speech recognition and machine translation technology.

Video Al

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



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





# Youngsum Kim CEO

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

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

Seunghyun Yang has directed the company's technology innovation based on the principle of creating wellmade 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.



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

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

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

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.



# Youngchang Song CFO

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

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

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'.



# Wantaek Lim Managing Director

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

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.

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.



# Changmin Oh Managing Director

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

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

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.



# Youngjoo Suh Managing Director

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

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

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.



# Minho Ahn Director

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

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.



# Hyunsu Kang Director

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

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.



# Hansang Cho Director

M.S. in Mathematics, Postech Former Research Director of AI Lab, Cognet9 Former Research Director of C<u>omputer Vision Lab, Zenitum</u>

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.