

4INLAB Inc. Company Introduction

*INTELLIGENCE
INNOVATION
INSIGHT
INTERACTION*





"Our AI vision platform provides users with easy and powerful image and video data processing and analysis capabilities"

01

Predictive Maintenance AI Solution

- Real-Time Equipment Condition Monitoring and Fault Prediction Solution
- Real-Time Condition Monitoring and Consumable Replacement Prediction Solution

02

Product Quality Management AI Solution

- Product Defect Detection Solution
- Product Defect Detection and Root Cause Analysis Solution

03

Production Optimization AI Solution

- Production Condition Optimization Control Solution

04

Process Intelligence AI Solution

- Process Error Detection Solution

05

Energy Management Intelligence AI Solution

- Factory Energy Demand Forecasting and Optimization Solution



CEO

Chang-Soon, Kim

- Ph.D. candidate of electrical engineering (CWNU)
- Master of electrical engineering (CWNU)
- Bachelor of electrical engineering (CWNU)
- Director of research institute at Big-AI Inc.
- Researcher at Mechatronics Research Institute
- Researcher at Korea Bio-system Inc.
- Researcher at Korea electricity research institute



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Jin-je, Park

- Master of electrical engineering (CWNU)
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- Senior research engineer at Big-AI Inc.



Principal Research Engineer

Dao Van Quan

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- Principal research engineer at Big-AI Inc.



Senior Research Engineer

Jin-je, Park

- Master course of statistics (GSNU)
- Bachelor of Dept. of Media and Communication (GNU)
- Research engineer at Big-AI Inc.
- Research engineer at LG electronics Inc.



Intelligent Energy Management Solution

Our intelligent energy management solution provides cutting-edge technologies that help factories and facilities increase energy efficiency and optimize energy consumption.

Identifying energy consumption patterns, preventing energy waste, and reducing operating costs through real-time data collection and analysis.

Our solutions contribute to sustainable business operations while also having a positive impact on the environment.



Intelligent Produce Process Innovation Solution

Intelligent produce process solution helps optimize manufacturing processes and improve production line efficiency.

We contribute to optimizing the produce process and improving product production speed and quality through real-time monitoring and automation technology.

Additionally, costs can be reduced by reducing defect rates and utilizing resources efficiently.



Intelligent Quality Optimization Solution

Quality management solution plays an important role in improving product quality and increasing customer satisfaction.

Through real-time data collection and quality indicator monitoring, our solutions proactively detect defective products and regulate production processes to minimize quality issues.

It provides customers with higher quality product and improves brand reputation.

Our latest smart camera incorporates a Neural Processing Unit (NPU) to enable real-time on-device AI capabilities. This allows for fast and secure use of various AI functionalities without the need for data transmission.

1. Built-in NPU (Neural Processing Unit)

- **High-Performance AI Processing:** The NPU is directly embedded within the camera, efficiently handling AI computations.
- **Real-Time Analysis:** Analyzes image and video data in real-time to provide instant feedback.

2. On-Device AI Capabilities

- **Enhanced Privacy:** Data is not transmitted externally, ensuring better privacy protection.
- **Low Latency:** Immediate AI functionality without cloud computing, providing quick response times.

3. High-Quality Image and Video

- **High-Resolution Sensor:** Delivers clear and vivid image quality.
- **Improved Low-Light Performance:** Maintains excellent image quality even in low-light conditions.

4. Diverse AI Applications

- **Facial Recognition:** Offers precise and fast facial recognition.
- **Object Detection and Tracking:** Detects and tracks various objects, providing context-aware information.
- **Image Enhancement:** Automatically corrects and improves low-quality images.



Dip-X camera module (NPU)



3W Camera fpc (NPU)

What is Vision AI MLOps?

Vision AI MLOps focuses specifically on machine learning operations for computer vision tasks, such as image recognition, object detection, and video analysis. It enables more efficient execution of these tasks.

Key Components

1. Data Management

- **Data Collection and Preparation:** Gathering and preprocessing large volumes of image and video data.
- **Data Labeling:** Accurately labeling data for model training.

2. Model Development and Training

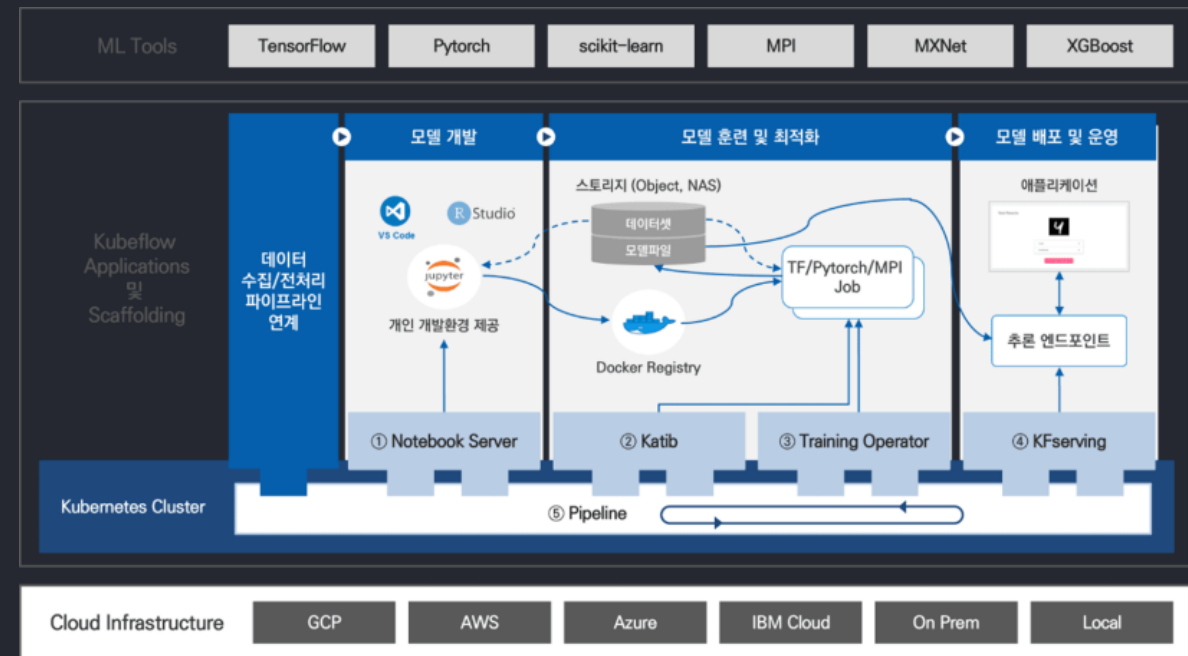
- **Model Architecture Design:** Designing suitable neural network architectures.
- **Training and Validation:** Training models with large datasets and validating their performance.

3. Deployment and Operations

- **Model Deployment:** Deploying trained models to cloud or edge devices.
- **Monitoring and Maintenance:** Real-time monitoring of model performance and updating models as needed.

4. Automation and Orchestration

- **CI/CD Pipelines:** Automating model updates through Continuous Integration and Continuous Deployment (CI/CD) pipelines.
- **Workflow Management:** Efficiently managing and orchestrating the entire MLOps workflow.



THANK YOU

for your attention and cooperation

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Company Introduction
Presentation

Thank you for your attention.

Chang-Soon, Kim / CEO

4INLAB company Introduction Vol.3