

CODEVISION

Autonomous AI Agent Company

Vertical AI
Physical AI
Human-Centered VLM
Ontology-based AI

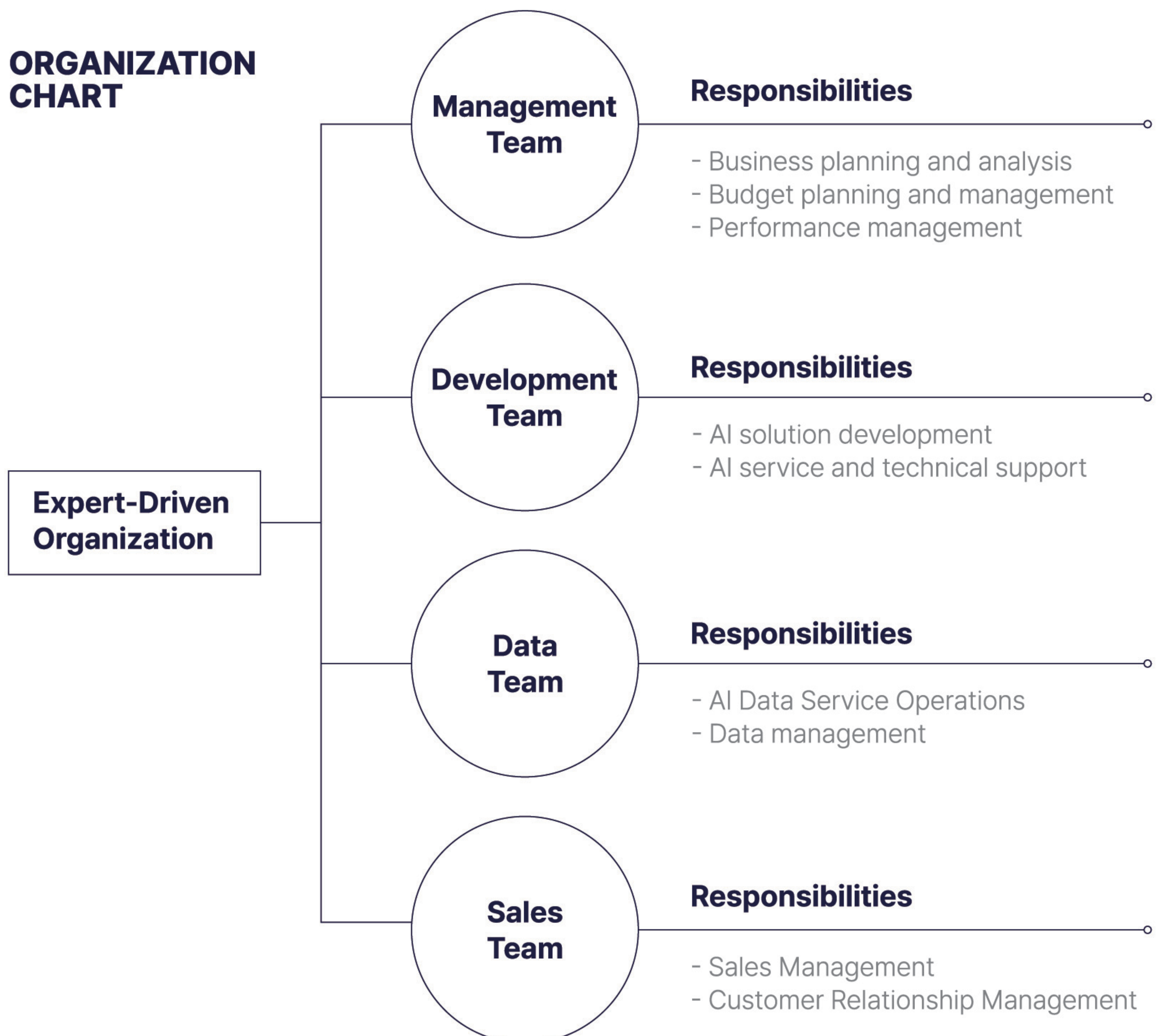


PIONEERING A BETTER TOMORROW WITH AI INNOVATION

VISION

CODEVISION believes that artificial intelligence is a powerful tool to make people's lives more convenient. Backed by unwavering dedication to technology research, the vision is to create a better future.

ORGANIZATION CHART



CODEVISION I OVERVIEW

BUSINESS AREAS



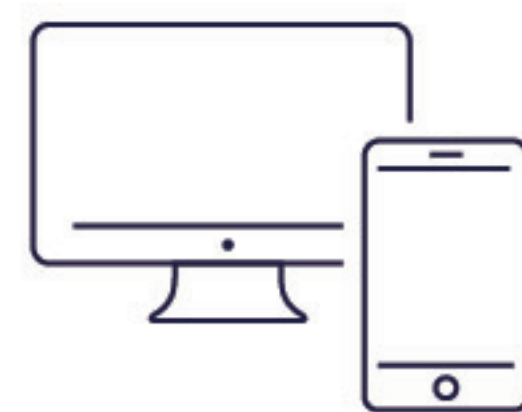
AI Dataset Development

AI data construction and data processing



AI R&D

AI research & development, Middleware construction



AI Platform & Applications

AI platform and application development

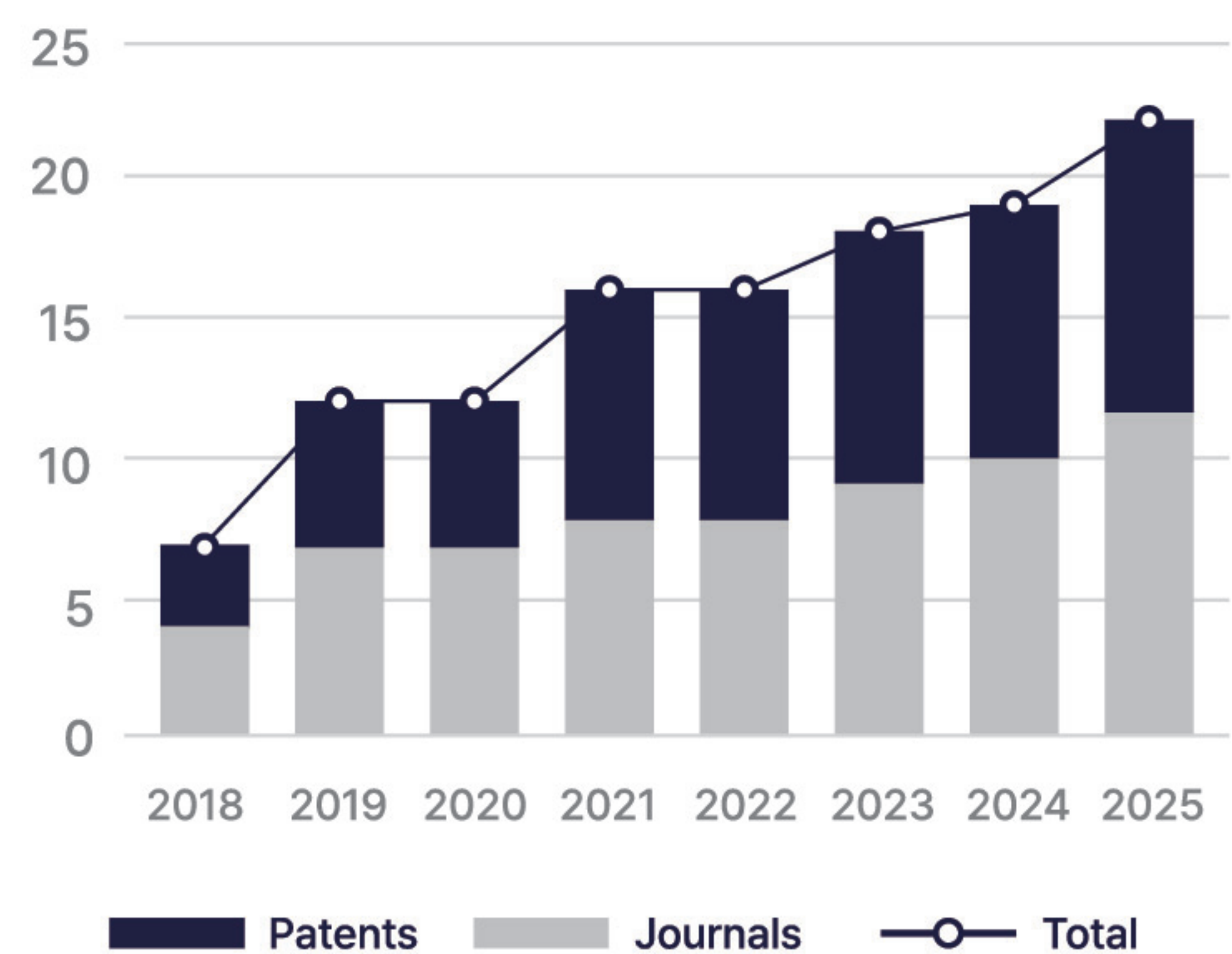
COMPANY

| | |
|-------------------|---|
| Name | CODEVISION Inc. |
| CEO | Eungyeol Song |
| Tel. | 02-2088-6624 |
| Foundation | November, 2018 |
| Website | https://codevision.kr/en |

RESEARCH / TECHNOLOGY ACCOMPLISHMENTS

AI Journals **12** / AI Patents **10**

AI R&D Cumulative Achievements



GOVERNMENT PROJECT ACHIEVEMENTS

- ✓ AI-based coastal algae bloom prediction development
- ✓ Power equipment fault detection and prediction development
- ✓ Motor valve predictive maintenance development
- ✓ AI model development using domestic semiconductors
- ✓ SaaS-based video background removal development
- ✓ K-NPU based LLM solution development
- ✓ Demonstration of Press machine monitoring solution
- ✓ Demonstration of injection machine monitoring solution

HISTORY

- 2025**
 - 04** Selected in the AI Convergence Project for the Manufacturing Industry
 - 05** Selected for the 2025 Data Voucher Project
 - 05** Selected for the 2025 AI Voucher Project
 - 05** Selected in the AI Semiconductor Application and Demonstration Project
 - 05** Selected as a specialized AI factory company
- 2024**
 - 01** Selected for the 2024 AI Voucher Project
 - 01** Selected for the AI Convergence Technology Diffusion Project
 - 07** Selected for the AI Convergence Technology Diffusion Project
 - 12** Selected as a superior case in the 2024 AI Voucher Program
 - 12** Selected as a superior case in the 2024 Data Voucher Program
- 2023**
 - 01** Selected for the 2023 AI Voucher Project
 - 01** Selected for the 2023 Data Voucher Project
 - 03** Selected as a superior case in the 2022 Data Voucher Program
 - 03** Selected as a medical field for the 2023 AI Voucher Program
 - 04** Selected for AI industry convergence technology R&D project
 - 05** Selected for a startup-centered university take-off project
 - 07** Selected business with shipbuilding and marine industry technology project
- 2022**
 - 01** Established Affiliated Research Institute
 - 03** Selected the 2022 AI Voucher Program
 - 03** Selected the 2022 Data Voucher Program
 - 04** Selected for the 2022 ICT R&D Voucher Program
 - 07** Approved as a professional R&D institution / engineering R&D institution
 - 11** Selected for the Startup growth technology development project in the field of a nuclear power plant
- 2021**
 - 04** Selected the 2021 AI Voucher Program
 - 05** Venture business approval
 - 05** Selected the 2021 Data Voucher Program
 - 06** Selected the 2021 ICT R&D Innovation Voucher Program
 - 07** Selected business with shipbuilding and marine industry Technology project
 - 11** Selected as a superior case in the 2021 AI Voucher Program
 - 12** Selected as a superior case in the 2021 Data Voucher Program
- 2020**
 - 05** Selected for the Data Voucher Program
 - 05** Selected for the AI Voucher Program
 - 12** Selected the 2020 Start-up growth technology development project
- 2019**
 - 04** Selected the core technology development project in Robotics
 - 06** Selected early start-up business at Yonsei University
 - 08** Design technology development business
- 2018**
 - 08** Order to technological innovation start-up business
 - 11** Established CODEVISION Inc.

BUSINESS

CODEVISION is an autonomous AI agent research and development company, delivering tailored solutions for businesses seeking automation. We support the entire process of AI adoption from data collection and model development to efficient operational platforms.

WHY CODEVISION?

Actual Suitability

CODEVISION provides professional AI based on actual field experience.

- ▶ CODEVISION AI experts visit industrial and manufacturing sites to gain a thorough understanding of on-site processes.
- ▶ We collect data from optimal positions without disrupting existing operations or workers.

Customized Solutions

CODEVISION AI experts provide customized solutions for each business

- ▶ We support your entire AI adoption process, from data creation to fully operational platforms, even when no data is available.
- ▶ Our AI experts deliver customized solutions that closely align with your industry and business processes.

PROCESS



Data Acquisition [3 months]

- ▶ Data acquisition using sensors and vision cameras
- ▶ High-quality datasets obtained through data cleansing and processing



AI Model Development [2 months]

- ▶ Industry-specific Algorithm design
- ▶ Custom solutions across On-Device and cloud environments



AI Solution Development [1 month]

- ▶ User-Friendly Platforms for Managers and Workers
- ▶ Enhancing AI model performance through newly collected data



APPLICABLE INDUSTRIES

- Automotive / Machinery Parts
- Electronic · Semiconductors
- Steel · Metals · Materials
- Chemicals
- Food · Biotechnology
- Textiles · Fashion
- Energy · Plant

CODEVISION DATA

Data quality determines the success or failure of industrial AI adoption.

CODEVISION provides optimal AI solutions based on high-quality data that reflects the characteristics of industrial sites.

INDUSTRY-SPECIFIC DATA DEVELOPMENT

COVI DATA

- 01

Customized Consulting

- Understanding client needs and industrial sites
 - Consulting-based customized data design and collection

- 02

Optimized Data Development

- Data construction system without disrupting existing workflows
 - Proven success in data construction across industries

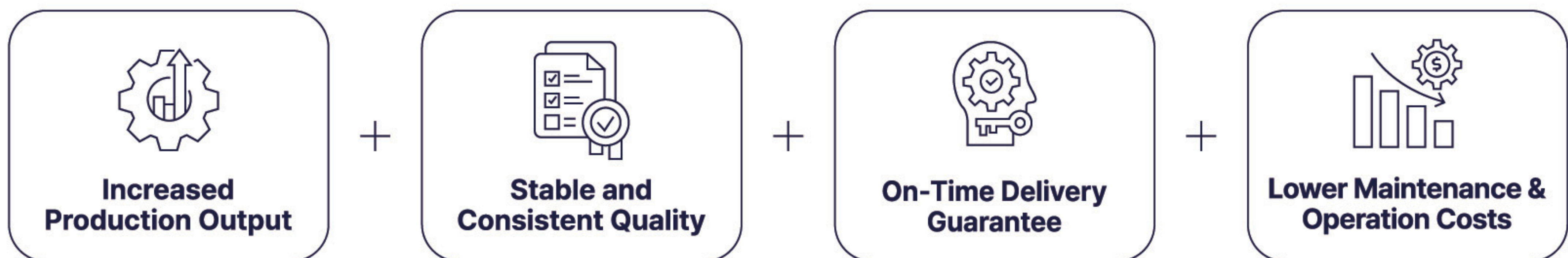
- 03

Systematic Management

- Quality Control: Step-by-step inspection and repeated testing
 - Additional performance improvement through reinspection of diverse cases

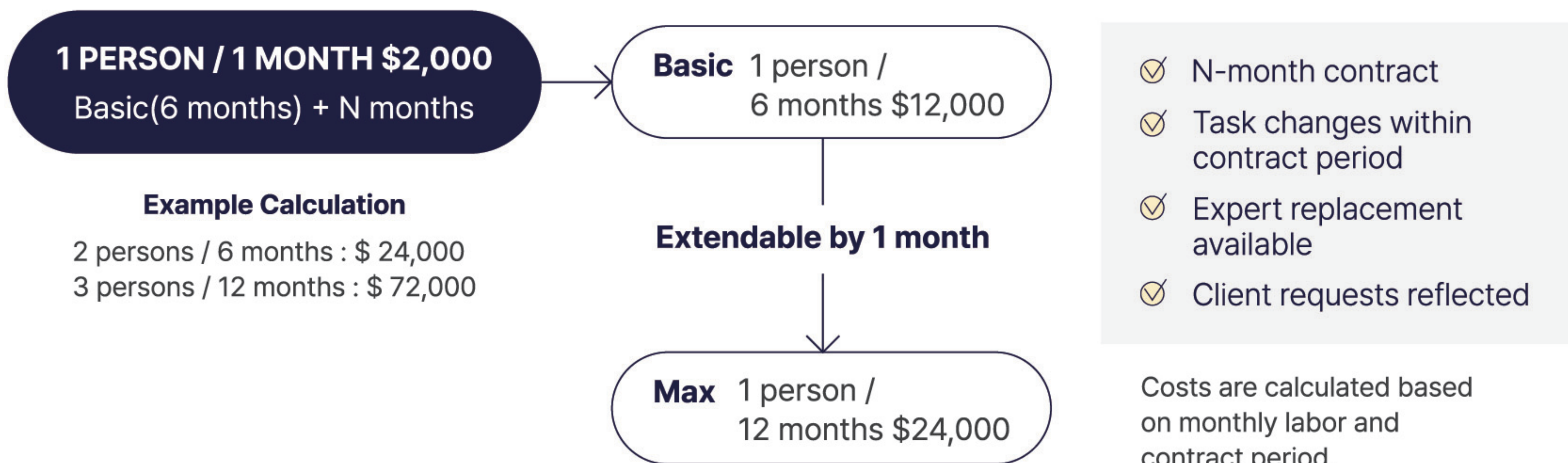
BENEFITS OF BUILDING HIGH-QUALITY DATA

AI developed with high quality datasets performs better



CODEVISION'S FOCUSED DATA SOLUTION

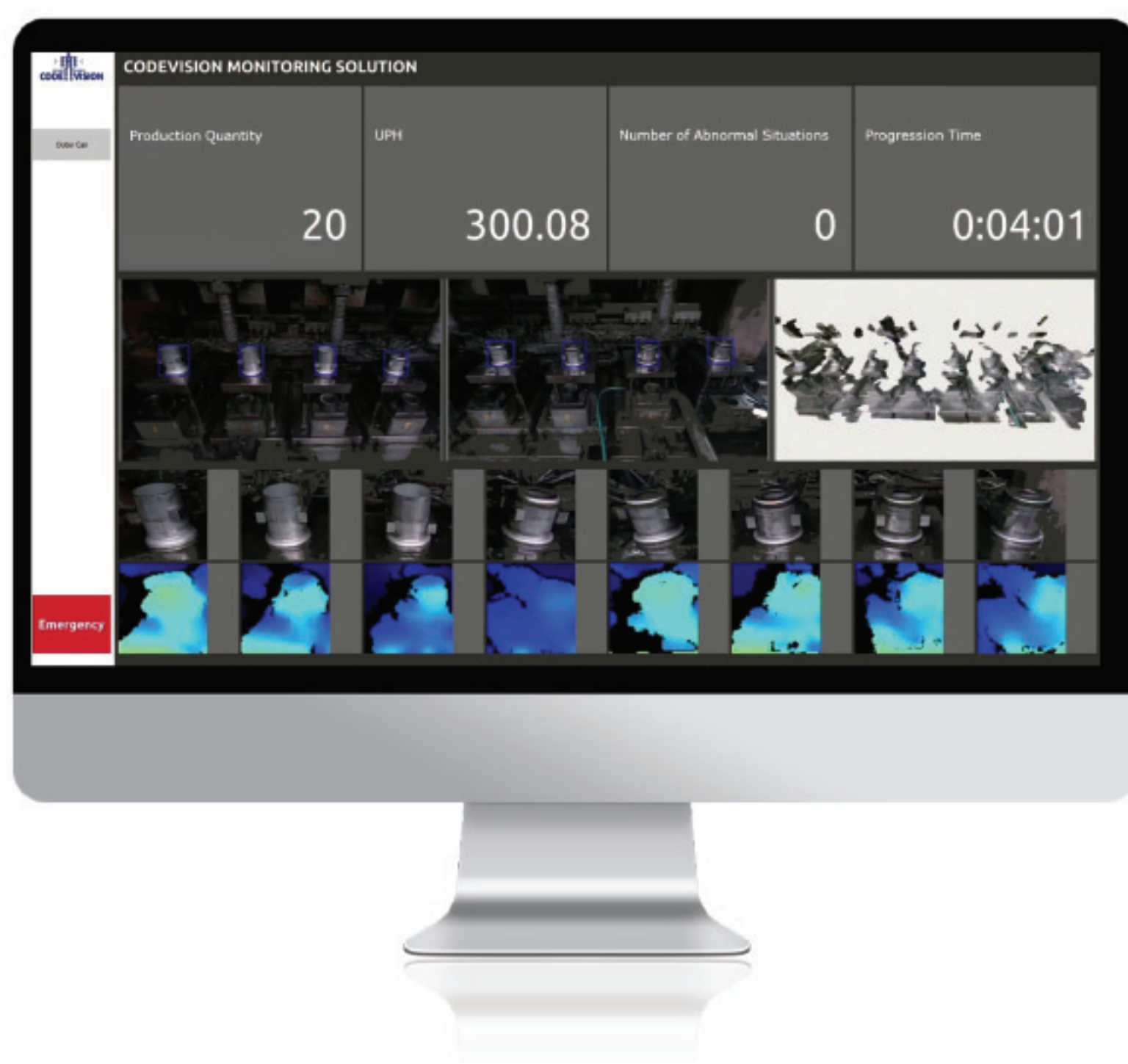
CODEVISION experts help industries achieve innovation through data



COVI PRESS PROCESS ANOMALY MONITORING SOLUTION

Abnormalities in manufacturing cause stoppages and disruptions, directly impacting profitability and reliability and incurring major losses such as delivery delays.

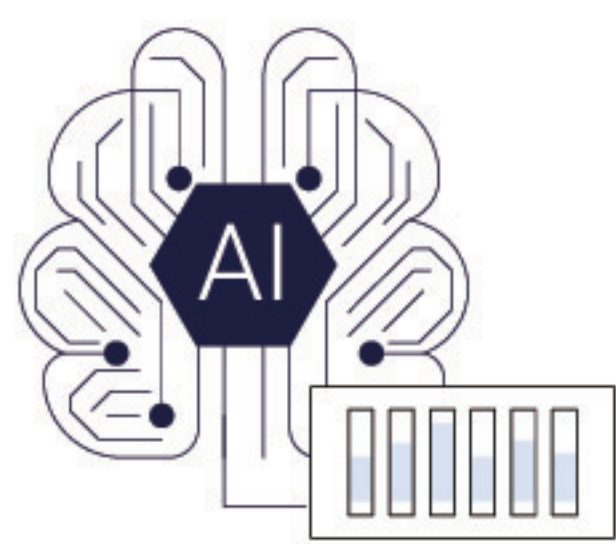
COVI Press Process Anomaly Monitoring Solution leverages trained data to detect anomalies in real time, minimizing process stoppages and ensuring a stable production infrastructure.



KEY FEATURES

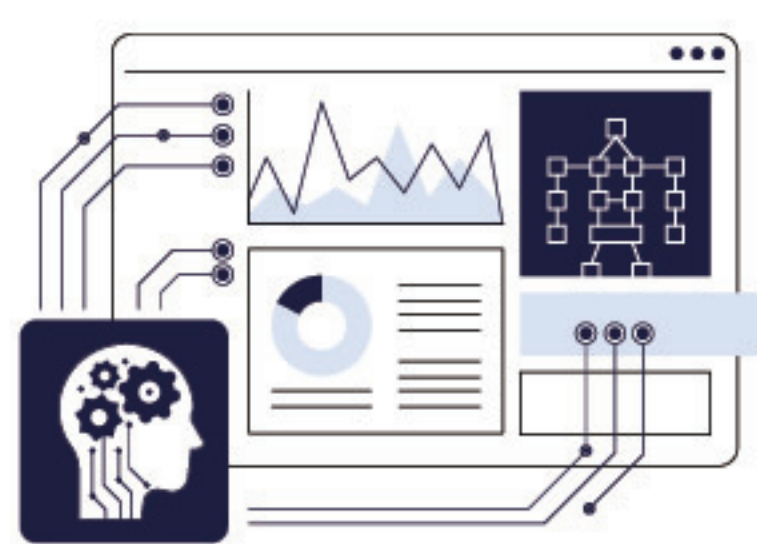
- 1 Real-time monitoring
- 2 Detect Anomalies
- 3 Anomaly Alert
- 4 Automated Process Shutdown

DATA ACQUISITION



System setup customized to the process environment to ensure stable data acquisition.

AI MODEL DEVELOPMENT



AI model development for detecting process abnormalities.

AI PLATFORM DEVELOPMENT



Development of a platform for centralized process management.

EXPECTED EFFECT

Increased Productivity

- ▶ Stable production through minimized process interruptions
- ▶ Preventing rework and delivery delays from defective parts

Reliable Quality

- ▶ Minimizing quality issues through AI-based defect detection
- ▶ Reducing rework risks through consistent quality control

Improved worker safety

- ▶ Managing hazardous processes through monitoring
- ▶ Reduced worker fatigue and accident risks

Enhanced Business Competitiveness

- ▶ Securing client trust through reliable delivery schedules
- ▶ Achieving differentiation over competitors

VARIOUS CONFIGURATIONS

ON-PREMISE

Client server deployment
Strong security
and flexible operation

CODEVISION SERVER








**High performance GPU
server operation
(NVIDIA A100,H200)**
Easy management & cost efficiency

CLOUD SERVER






**Solutions built on domestic/
overseas cloud providers**
High scalability & flexibility

COST REDUCTION EFFECT






PRODUCTIVITY IMPROVEMENT

-  Downtime
-  5% Reduction
-  COVI Downtime
-  50 workers
-  3 shifts
-  8 hour/day
-  **\$250,000**
Annual Production Gain
[50 workers × 8h × 250 days × 3 shifts]

QUALITY IMPROVEMENT

-  **\$140**
Defect rework cost
-  3 workers
-  1 rework/day
-  250 days/year
-  **\$108,000**
Annual saving

RESOURCE OPTIMIZATION


-  3 managers
-  1h/day
-  250 days/year
-  **750** hr
-  **\$13,400**
Annual value
\$17/hr

Client-Specific Packages

- ✓ Customized solutions for factory environments
- ✓ Software customized for client needs
- ✓ Gradual adoption possible

CUSTOMIZED OPTIONS

SERVICE COMPONENTS


 **Hardware**
(sensor, camera, server)


 **AI model development
and software deployment**

 **Maintenance support
by dedicated engineers**

MAINTENANCE SUBSCRIPTION

 **Regular Inspection Service**
Free hardware/software
upgrades after 6 months

 **Emergency support**
Fast remote/on-site response
for unexpected issues

 **Continuous Upgrades**
Ongoing updates with the latest
AI algorithms and features

Covi solutions, companies can prevent annual losses of more than ₩400 million

COVI INJECTION MOLDING DEFECT MONITORING SOLUTION

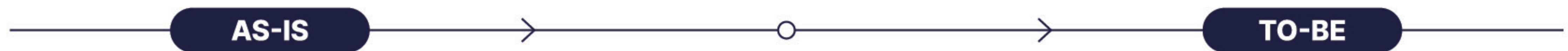
Vision inspection for detecting defects in molded assembly parts is vulnerable to external environmental changes such as lighting. This leads to unstable inspection results, making it difficult to maintain reliable quality.

CODEVISION Injection Molding Defect Monitoring Solution performs accurate inspections through AI algorithms based on diverse case training data, remaining stable against environmental changes.



DASHBOARD

- 1 Total Production Quantity UI
- 2 Hourly Production UI
- 3 Defective Quantity UI
- 4 Inspection Time UI



CONVENTIONAL VISION INSPECTION

Vulnerable to environmental changes, causing false or missed detections of normal products.

AI MODEL DEVELOPMENT

Development of defect detection algorithms for injection molding resilient to environmental changes.

CODEVISION MACHINE VISION INSPECTION

Machine vision inspection with higher accuracy by training on more edge cases.

KEY FEATURES

Monitoring Feature

- ▶ Real-time Visualization of Defect Inspection Process

Dashboard

- ▶ Dashboard for intuitive inspection result visualization

Automatic Upload of AI Judgments

- ▶ Automatic upload of inspection data and AI judgments to the analysis page

History Management and Search

- ▶ Traceability and analysis of past inspection data

COVI PRESS DEFECT MONITORING SOLUTION

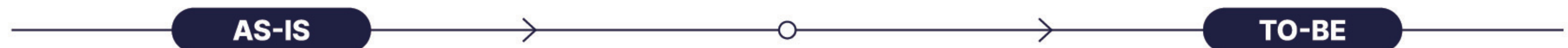
Micro components manufactured in precision processes can become defective from size differences as small as a few micrometers. However, conventional inspection methods have limitations in accuracy, especially under external factors such as oil films.

COVI Press Defect Monitoring Solution overcomes the limitations of conventional inspection methods by understanding the unique characteristics of micro-scale manufacturing environments. It delivers high-precision and reliable detection performance, even under challenging external factors such as oil films and foreign contaminants.



PLATFORM STRUCTURE

- 1 Monitoring Real-Time monitoring
- 2 Data Analysis Dashboard
- 3 Data Labeling Workspace
- 4 Data Training Page



VISUAL INSPECTION

Reliance on workers' subjective judgment leads to accuracy issues.

DATA ACQUISITION SYSTEM

Building a data acquisition system that does not interfere with production processes.

COVI MONITORING SOLUTION

Building a monitoring platform to detect defects in micro components.

EXPECTED EFFECT

Maintenance Optimization

- ▶ Reduced manpower and time for process management

Quality Stabilization

- ▶ Early detection of micro-defects to prevent mass production of faulty parts

Improved Production Efficiency

- ▶ Minimized rework through AI-driven defect screening

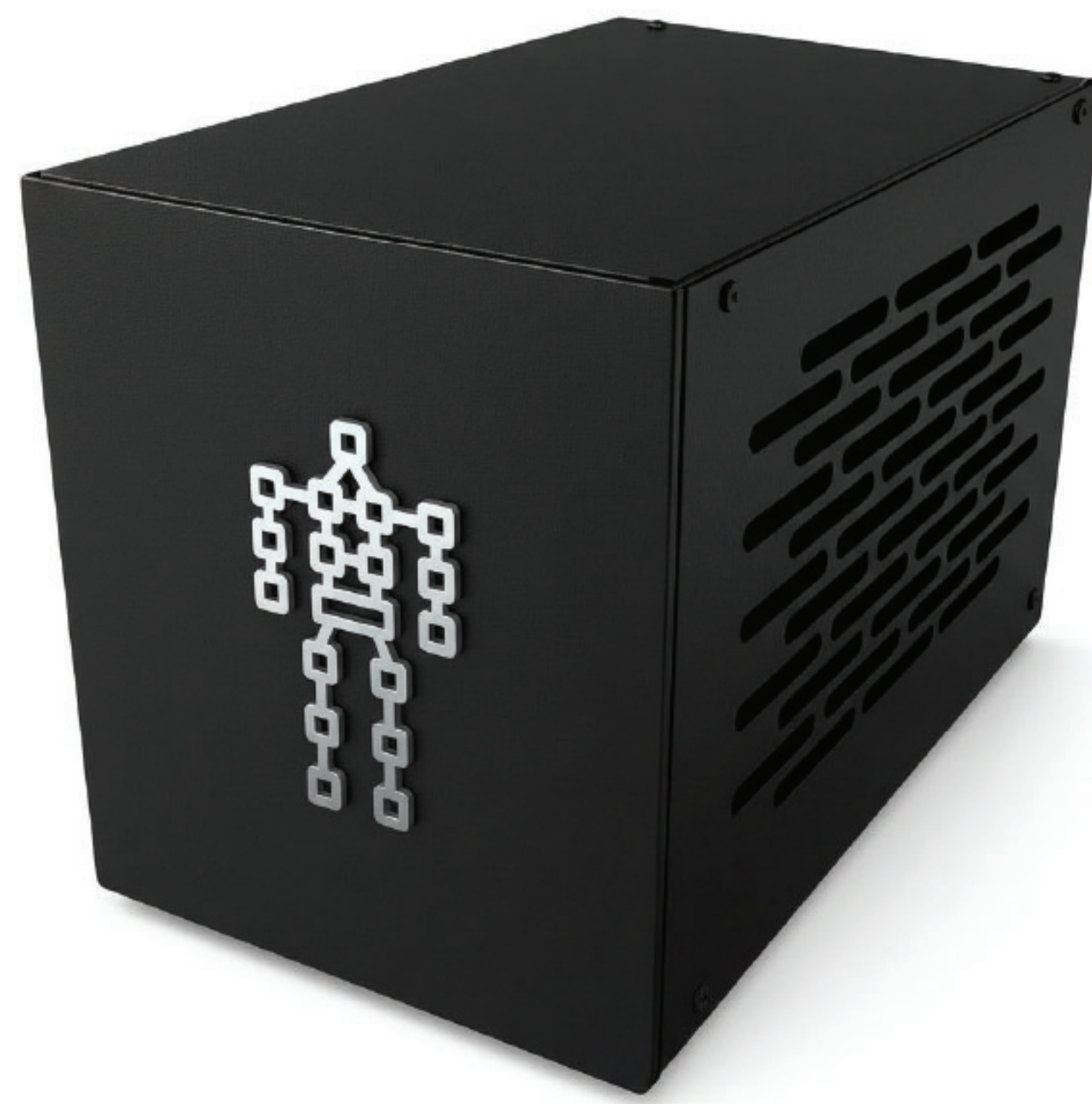
Customer Trust

- ▶ Accurate Production Forecasts for Stable Delivery Schedules

COVI K-NPU SOLUTION

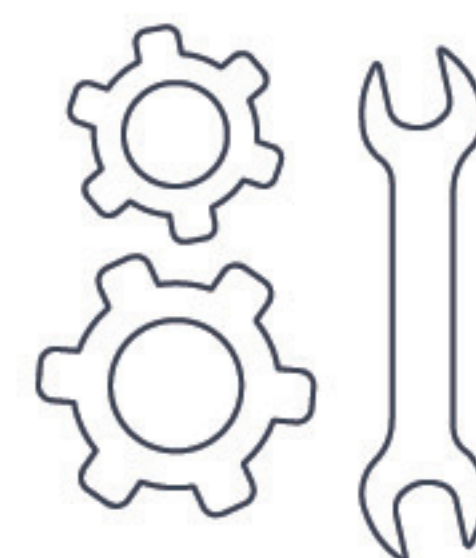
Implementing AI solutions in industrial sites is essential, but upgrading to high-performance GPUs or replacing PCs often requires significant investment.

COVI K-NPU solution provides high-performance NPU capability simply by connecting to existing PCs. It reduces costs and enables a reliable start to AI innovation without replacing hardware.



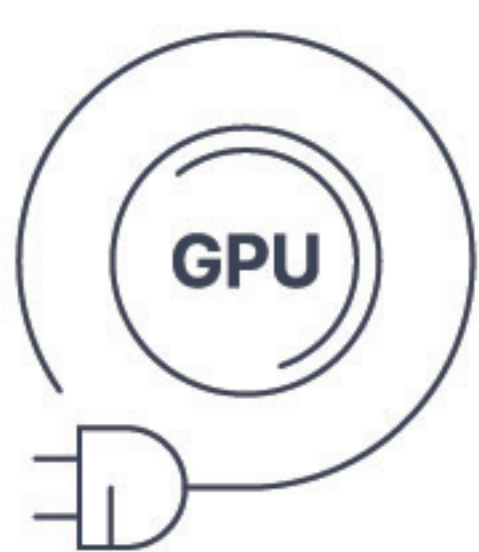
CONVENIENCE

High-performance AI available with a simple connection to existing PC or equipment



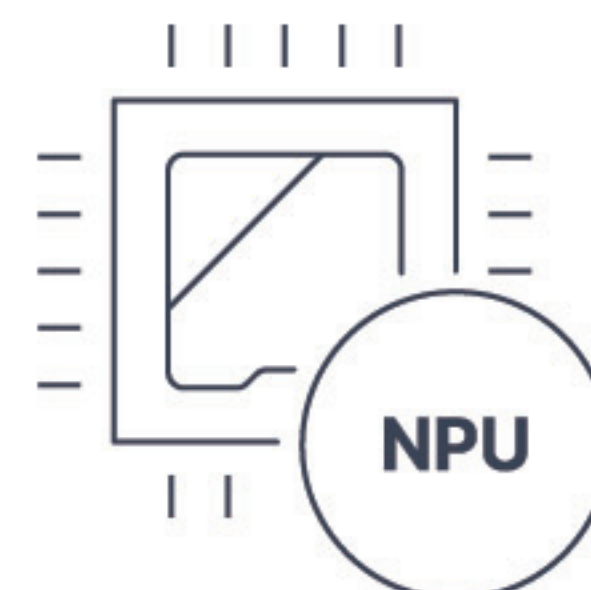
INSTALLATION FLEXIBILITY

Compact design adaptable to diverse site environments



IMPROVED ENERGY EFFICIENCY

Lower power consumption than conventional GPU, reducing factory operating costs



K-NPU

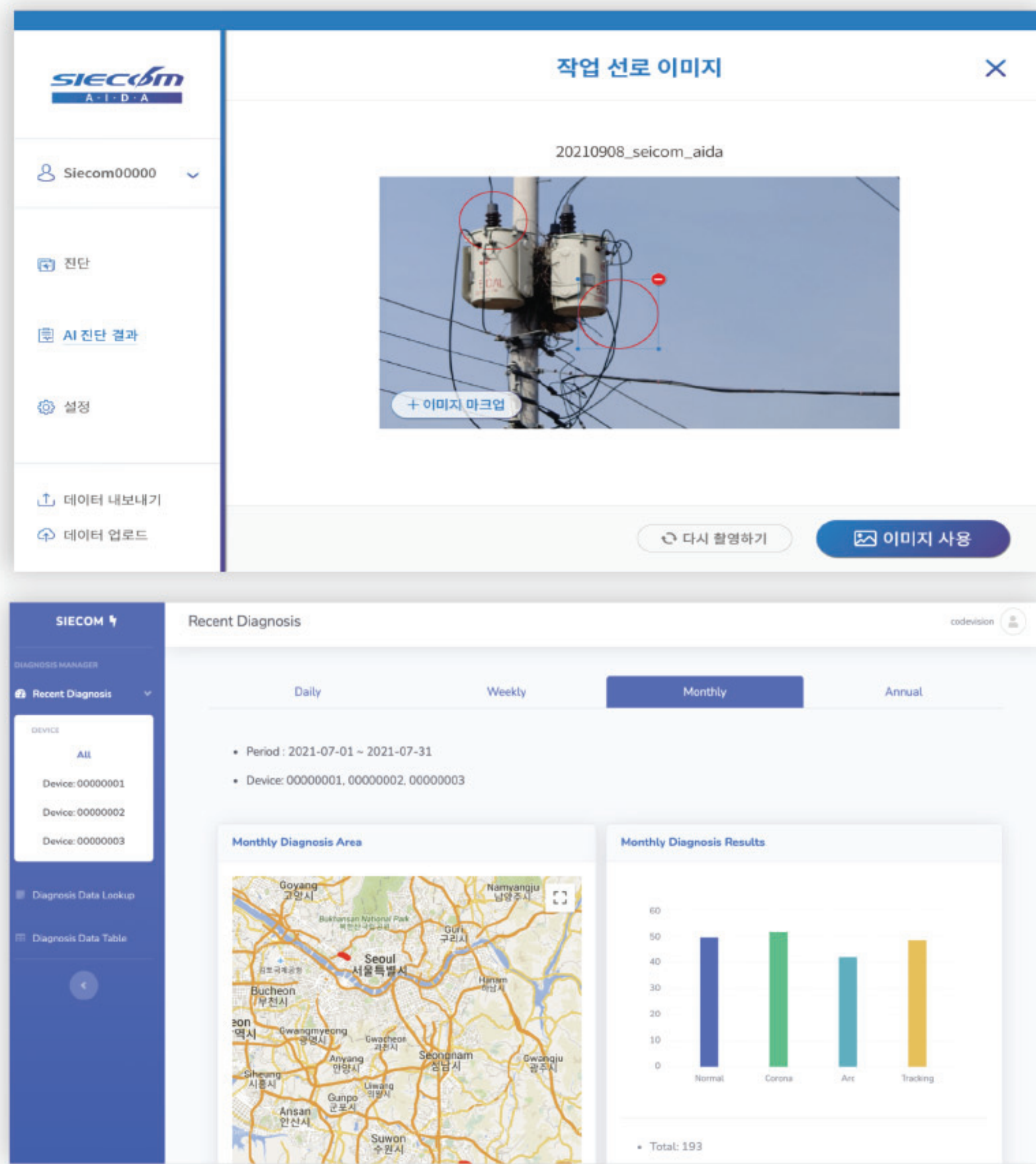
Significantly improved AI processing speed for enhanced solution performance

| PACKAGE | FUNCTIONALITY | COMPONENT | |
|---------|---------------------|-----------|-------------------------|
| | AI Computing | NPU | (Furiosa AI WARBOY) |
| | Graphics Processing | GPU-Dock | (85W PD GPU Dock) |
| | Connectivity | Cable | (Thunderbolt Cable 3/4) |

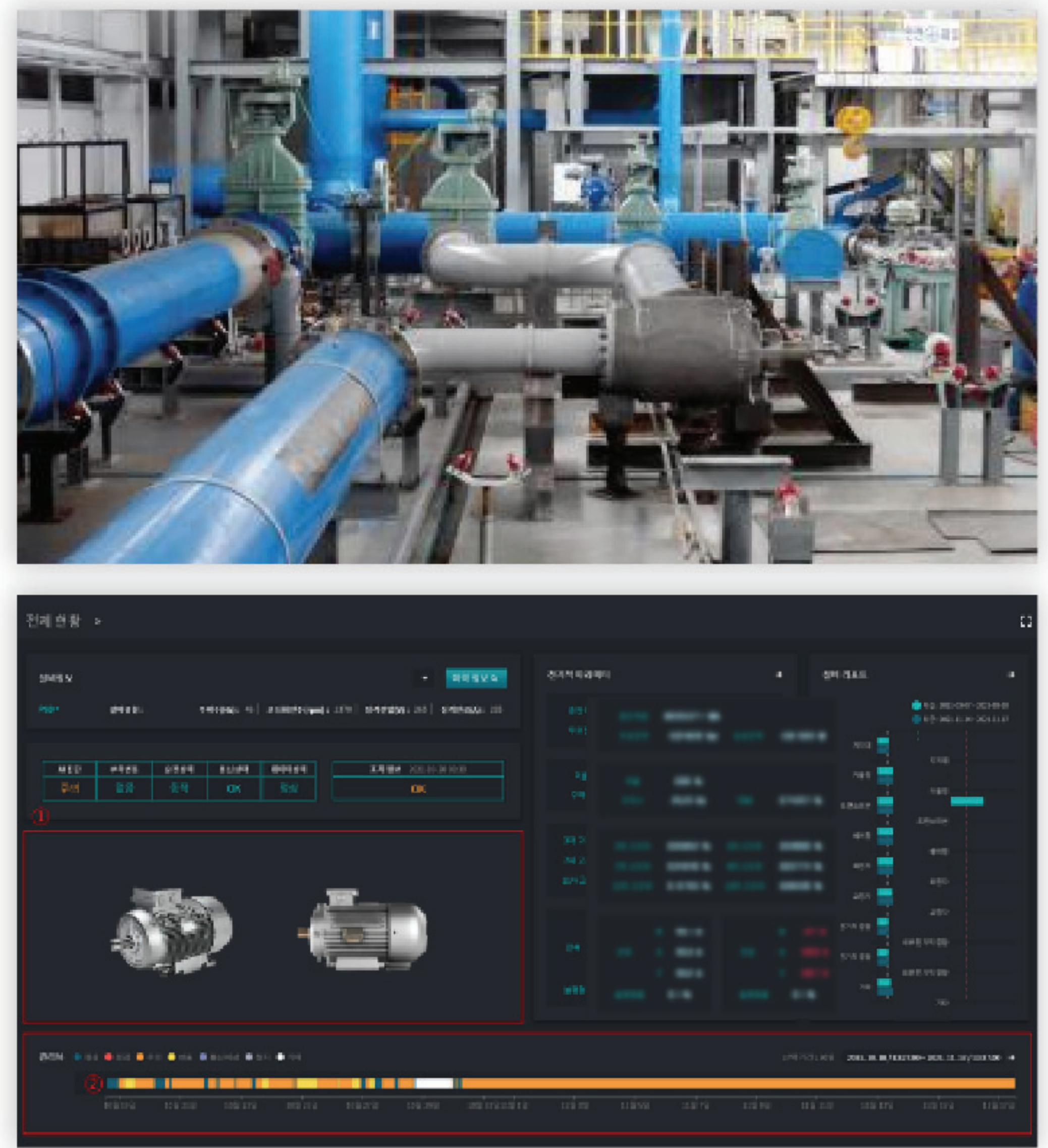
KEY REFERENCES

CODEVISION has successfully carried out numerous projects.

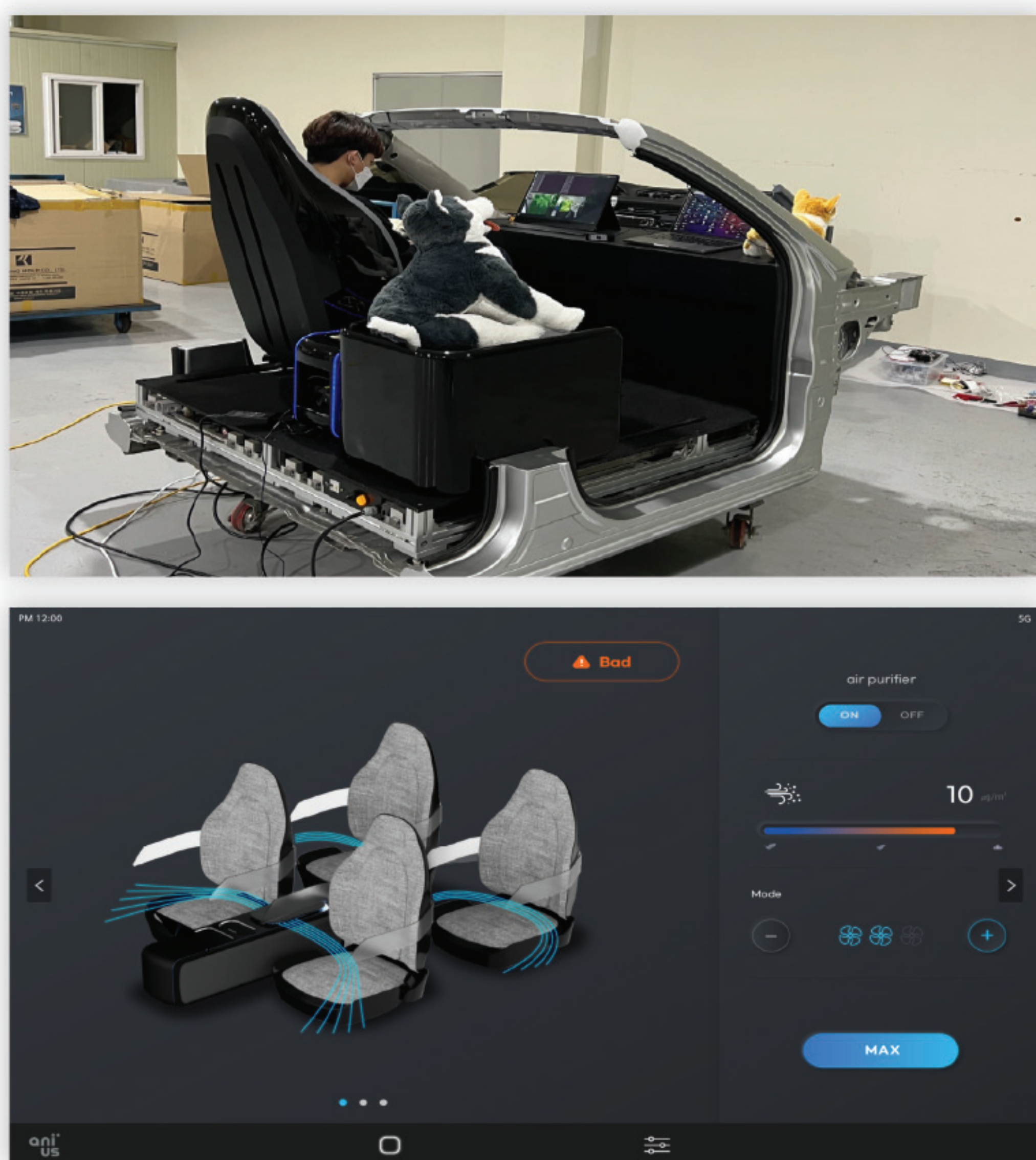
ELECTRIC POWER EQUIPMENT FAILURE DETECTION



PROGNOSTICS AND HEALTH MANAGEMENT (PHM) SOLUTION



MOBILITY OCCUPANT RECOGNITION AND INDOOR ANALYSIS

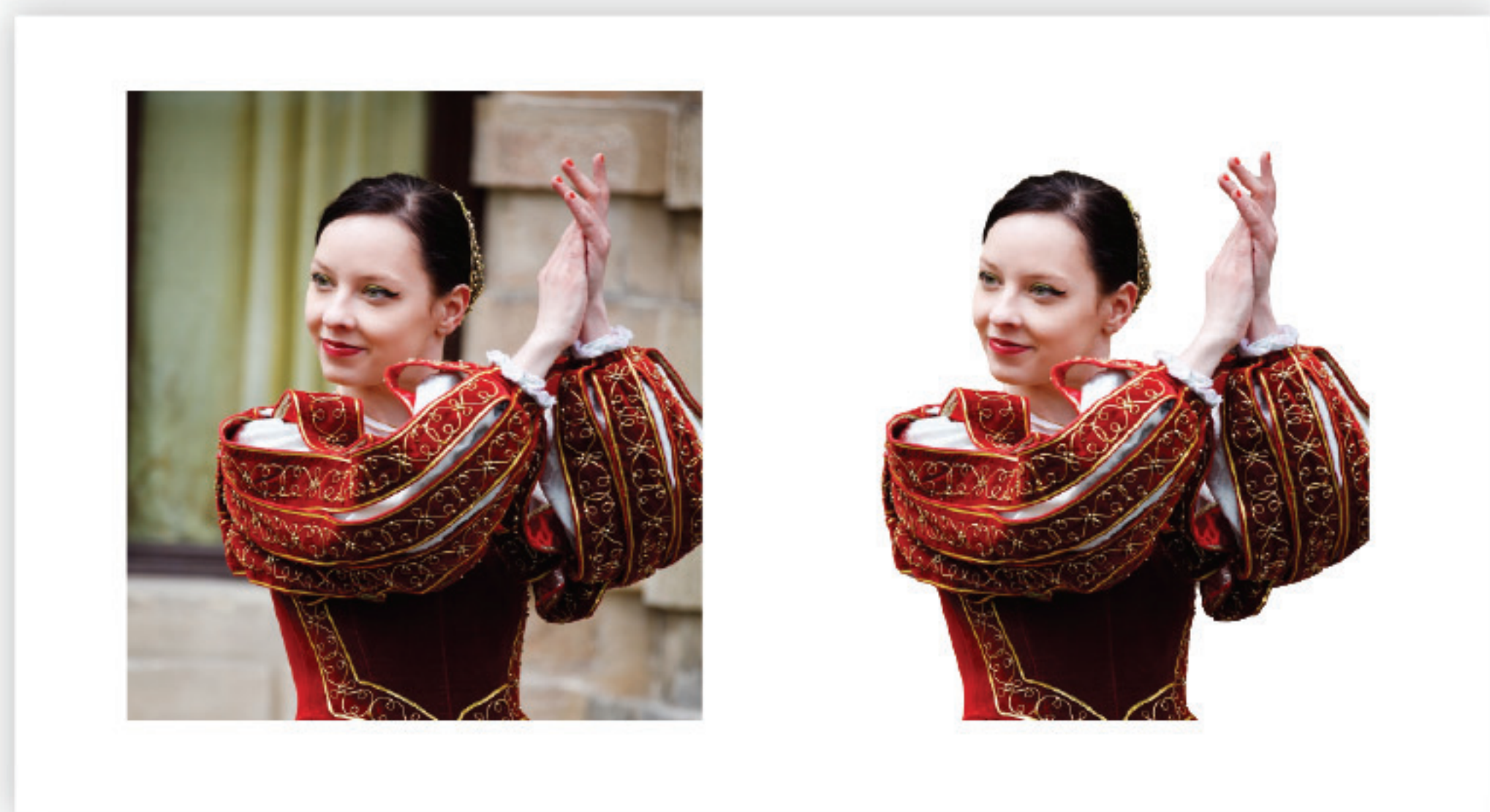
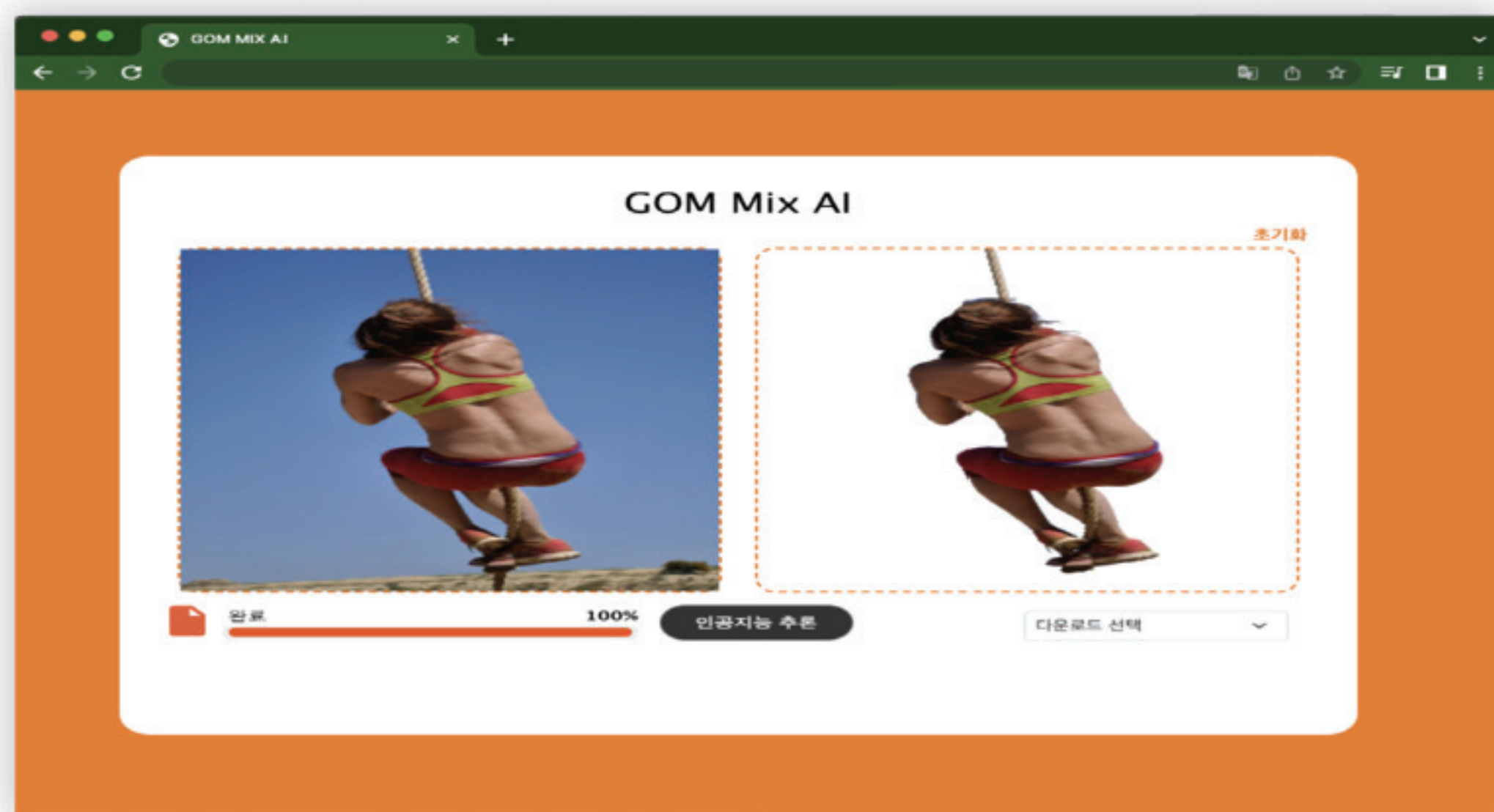


AI-DRIVEN SOLUTION FOR CRASH TEST ANALYSIS AND TEST EVALUATION

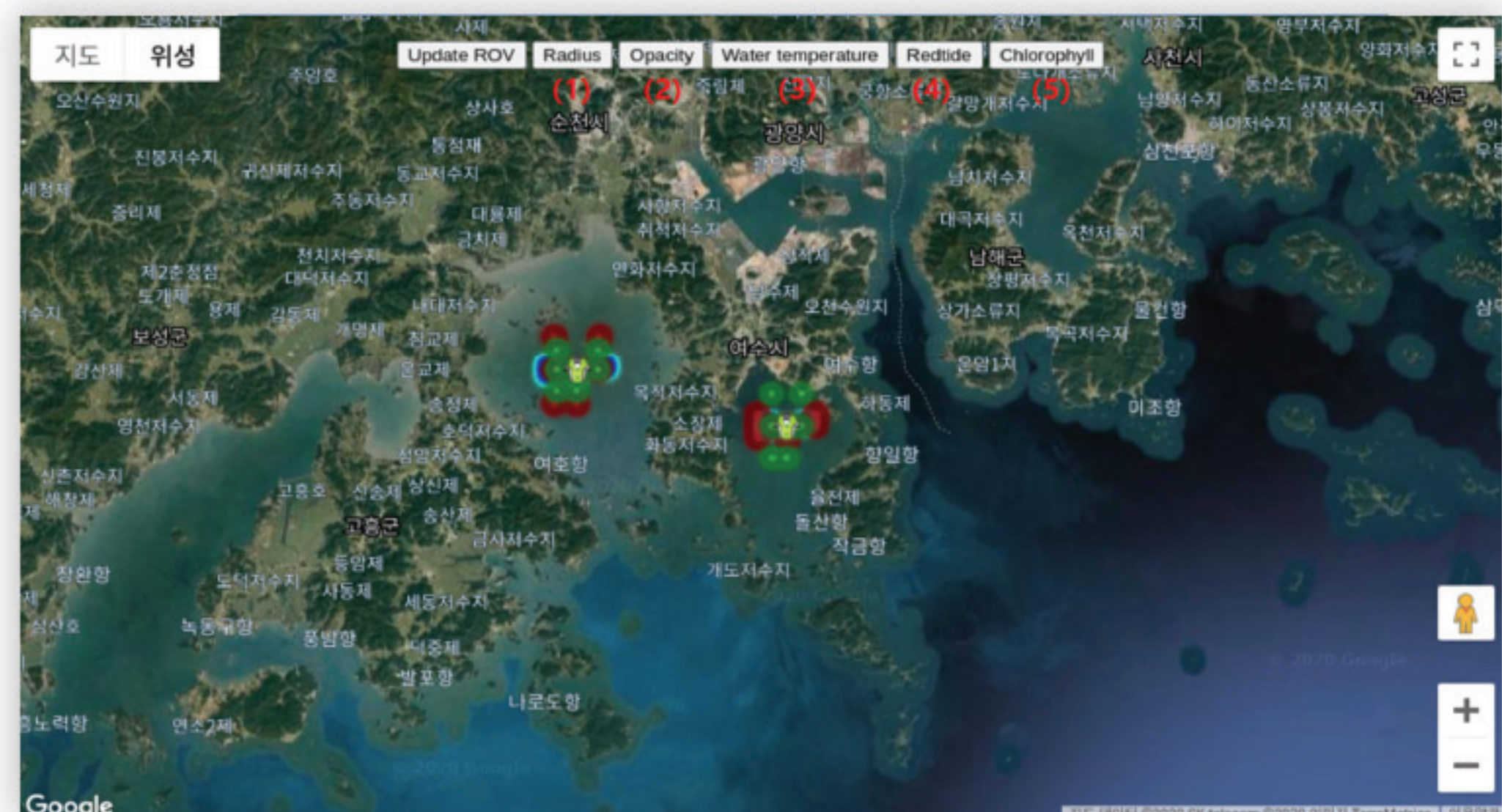


USING MARINE ROBOTS

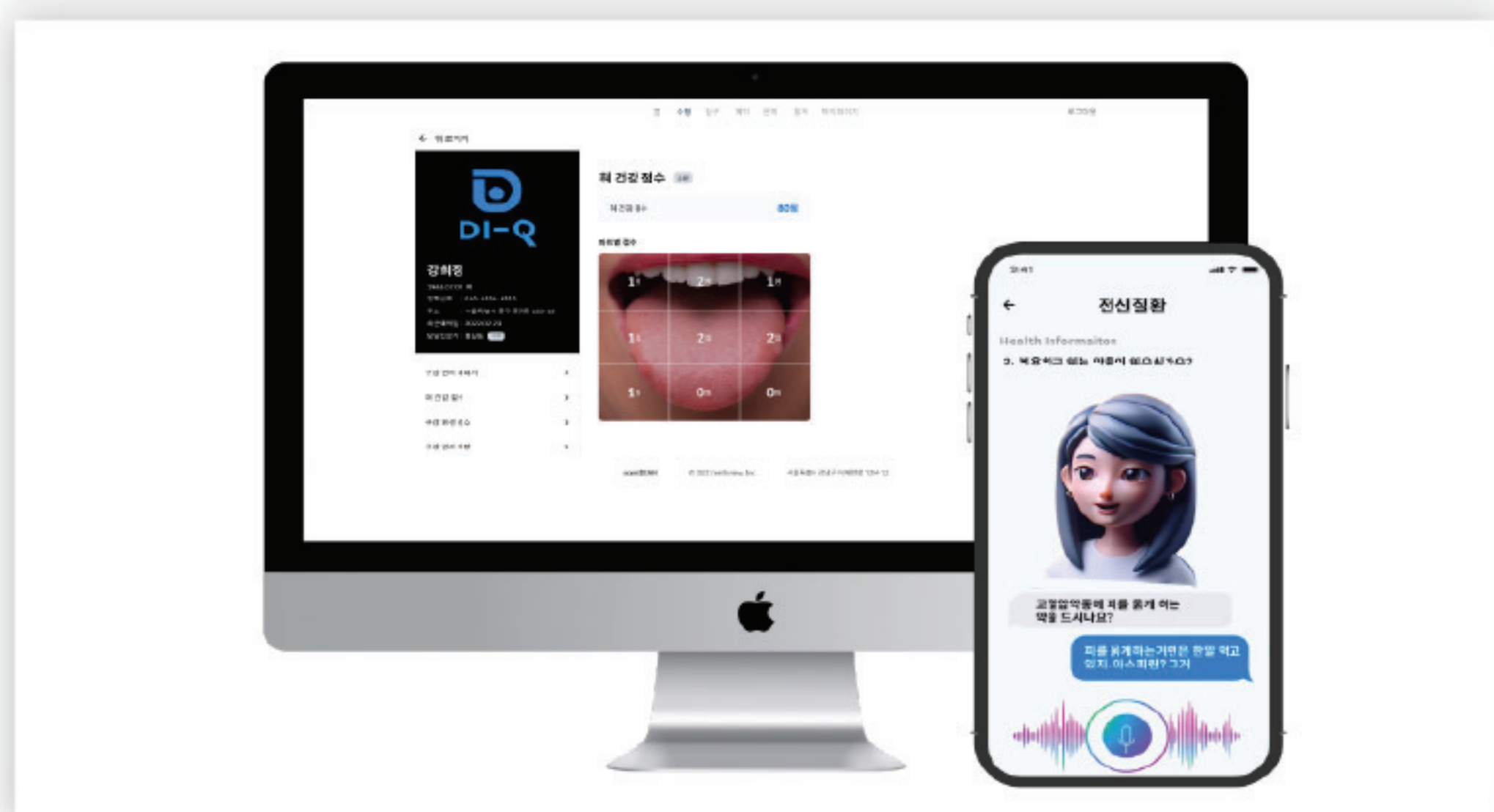
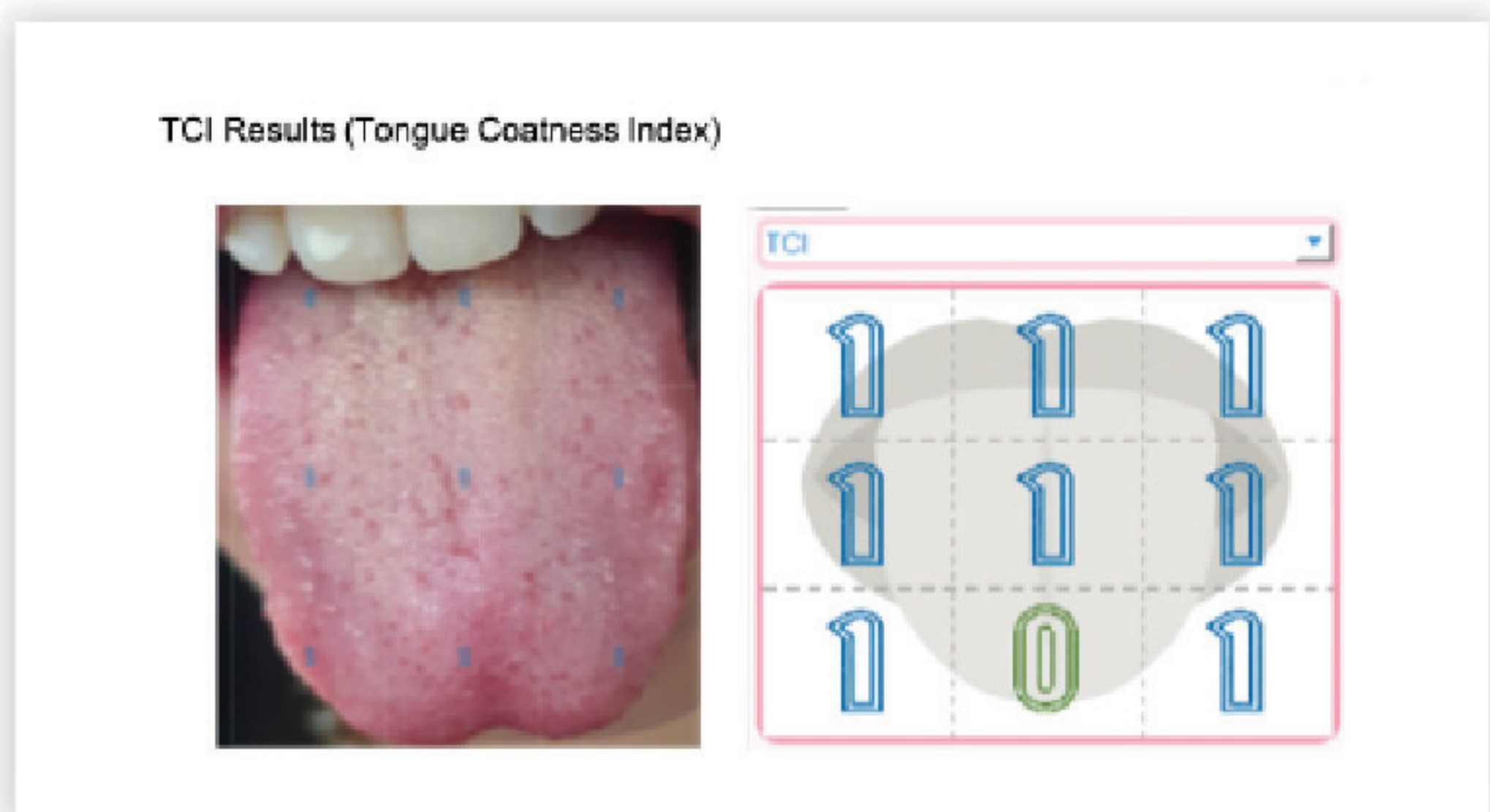
VIDEO BACKGROUND REMOVAL SOLUTION



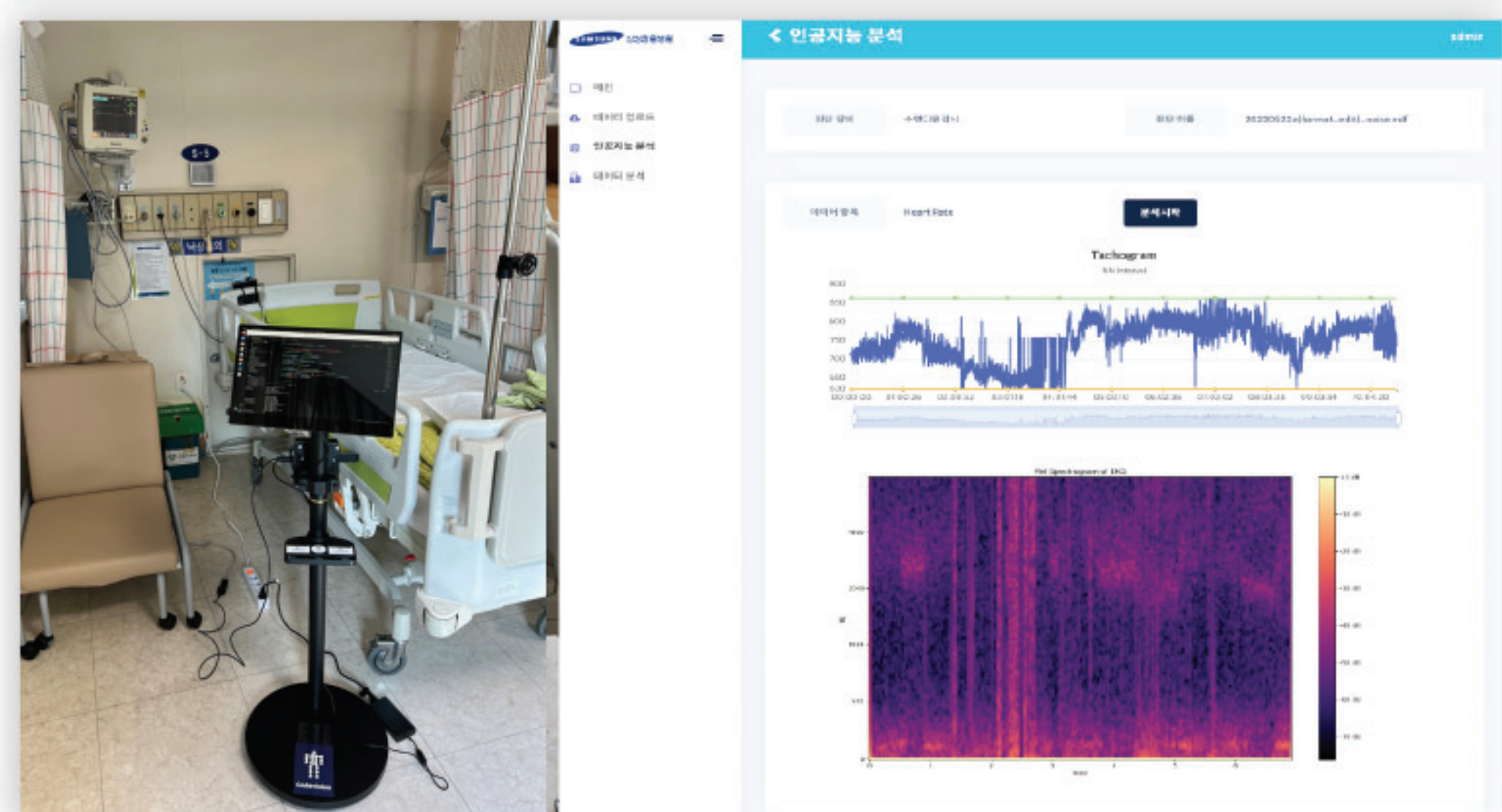
UNDERWATER MONITORING AND RED-GREEN ALGAE PREDICTION



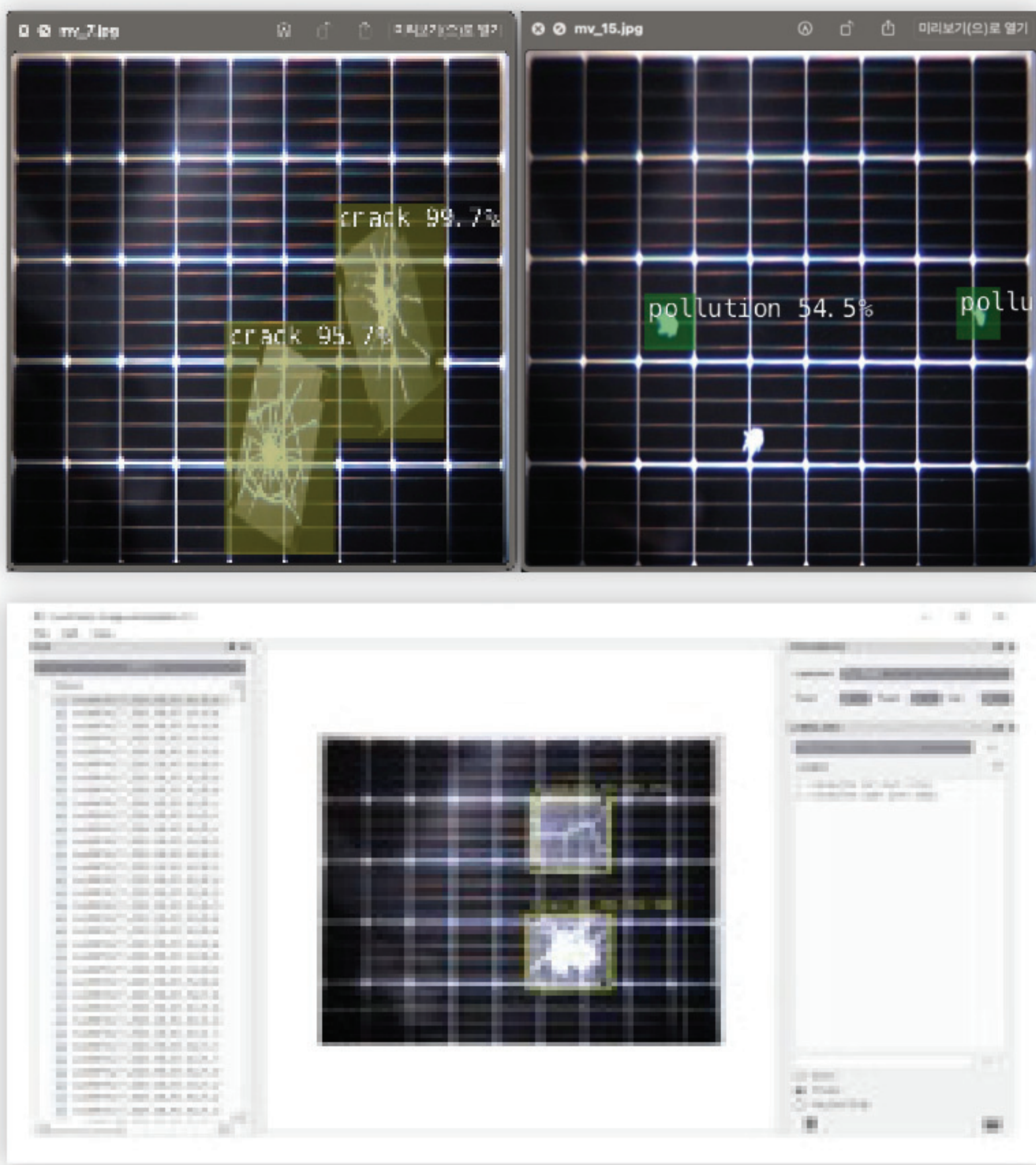
TONGUE ANALYSIS SOLUTION FOR DIGITAL HEALTH DIAGNOSIS



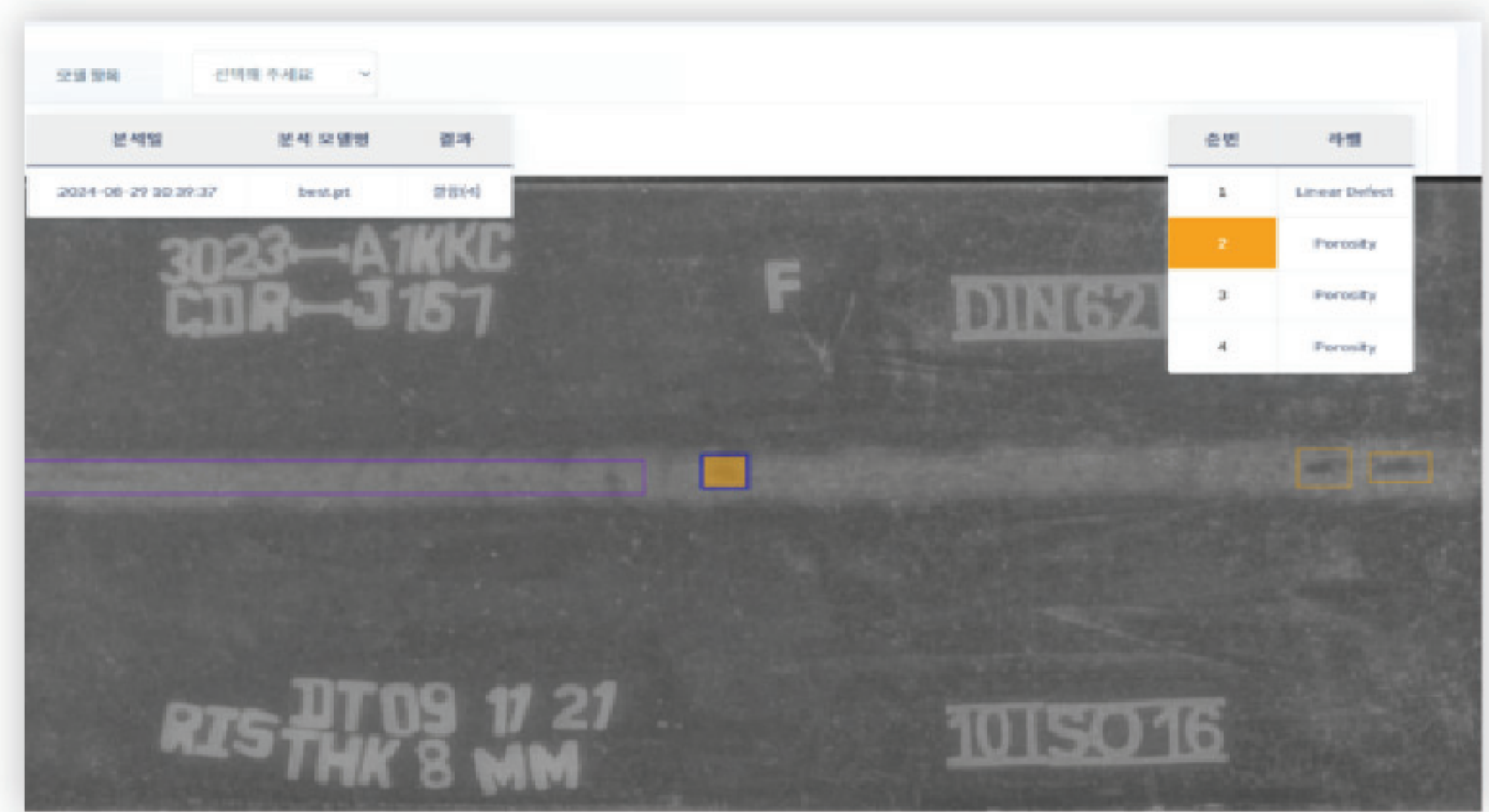
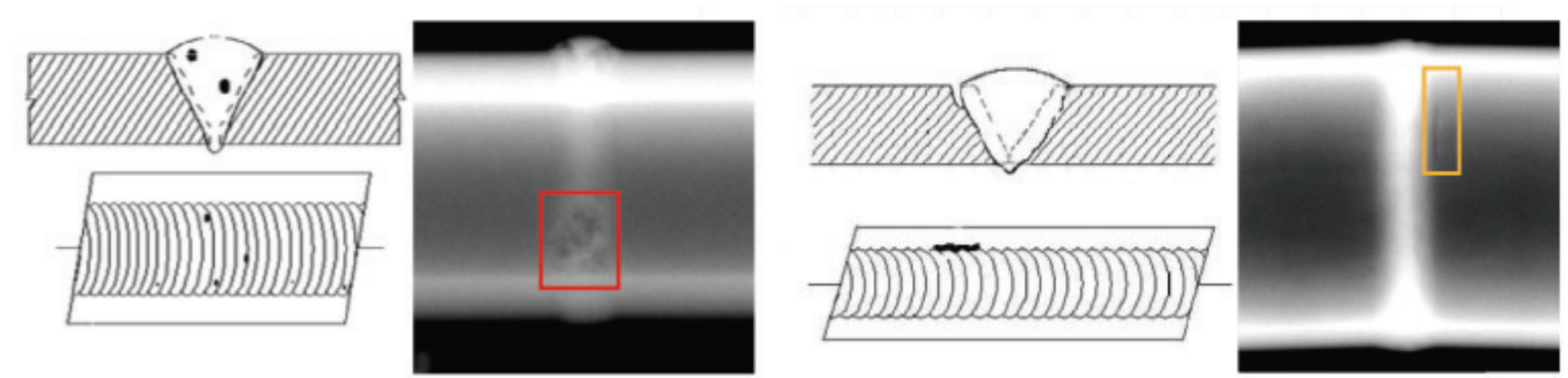
POLYSOMNOGRAPHY ANALYSIS AND DIAGNOSIS ASSISTANT



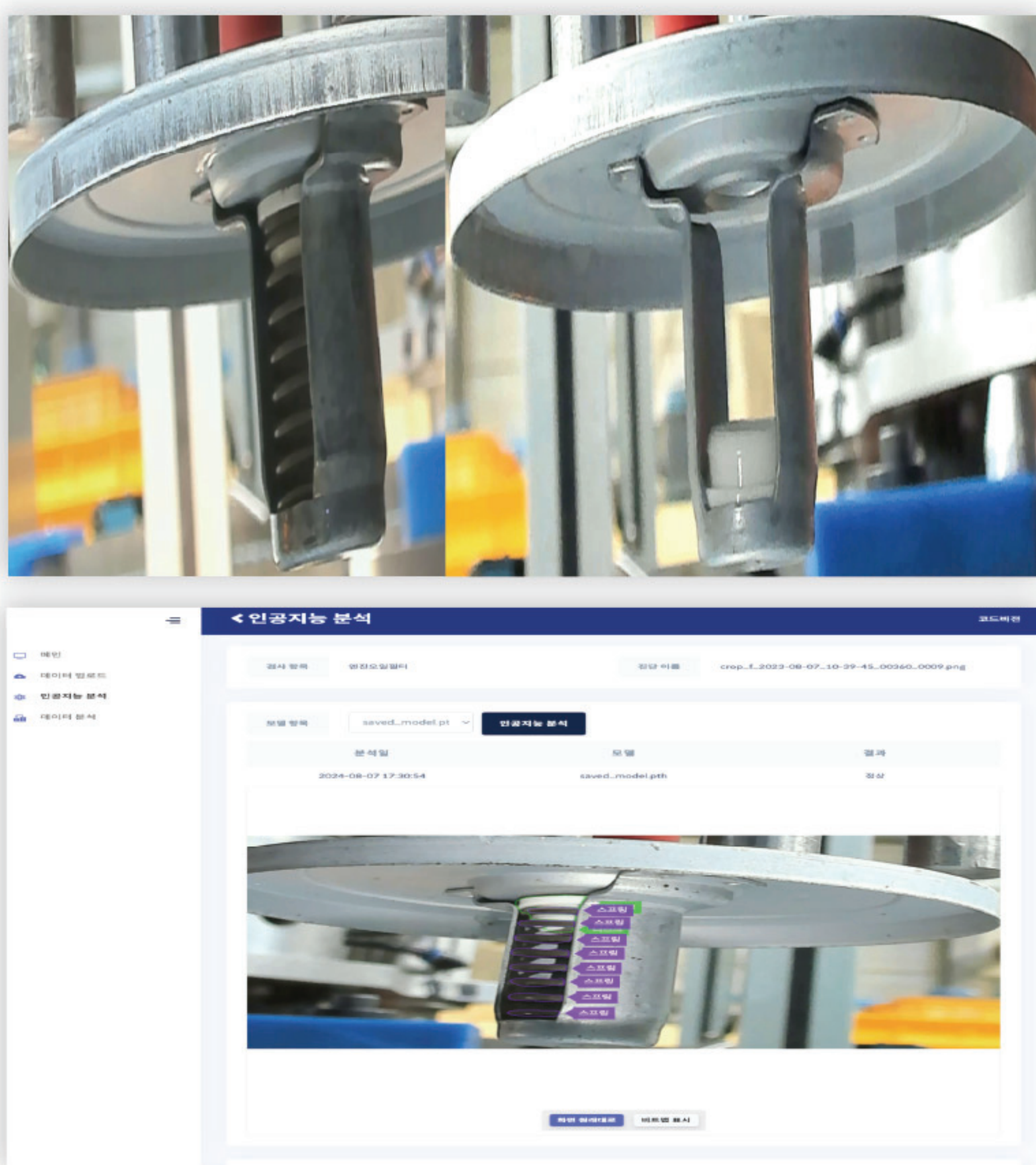
SOLAR PANEL DEFECT DETECTION SOLUTION



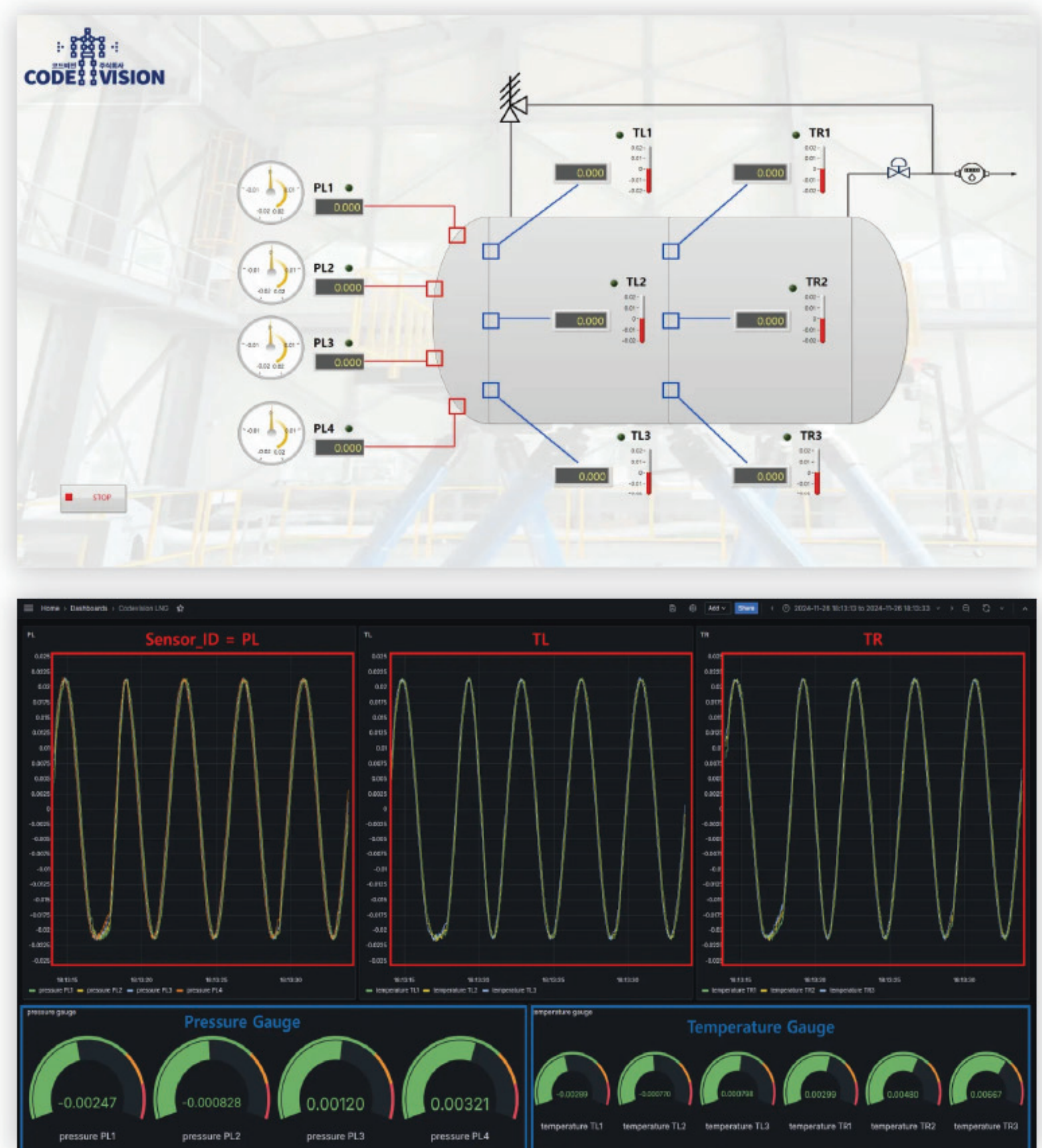
WELD DEFECT DETECTION SOLUTION FOR RADIOGRAPHIC TESTING (RT)



ENGINE OIL FILTER PLATE DEFECT DETECTION SOLUTION



LNG/LH2 SHIP CARGO TANK MONITORING SOLUTION



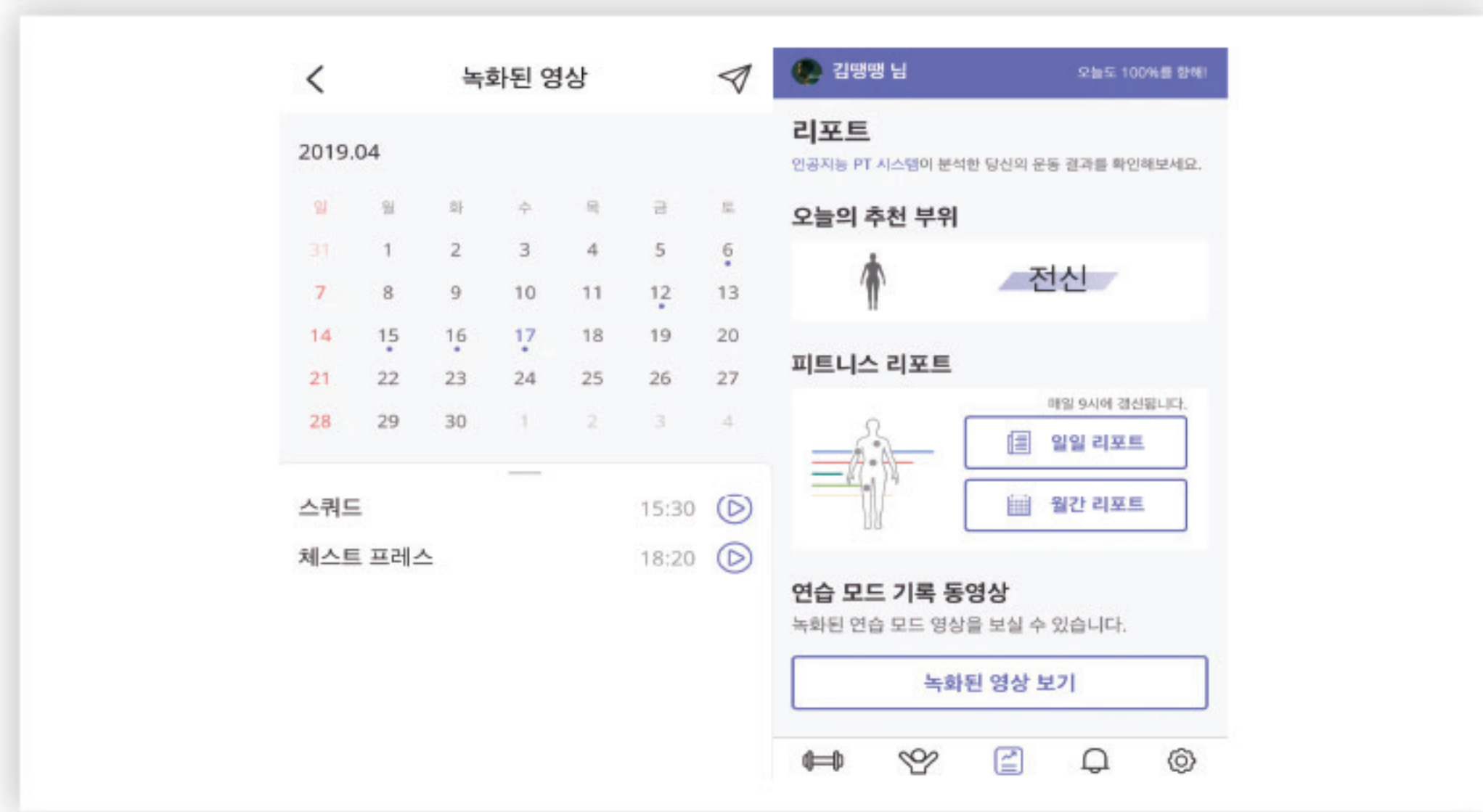
STEEL SHEETS DEFECT AI MONITORING SOLUTION



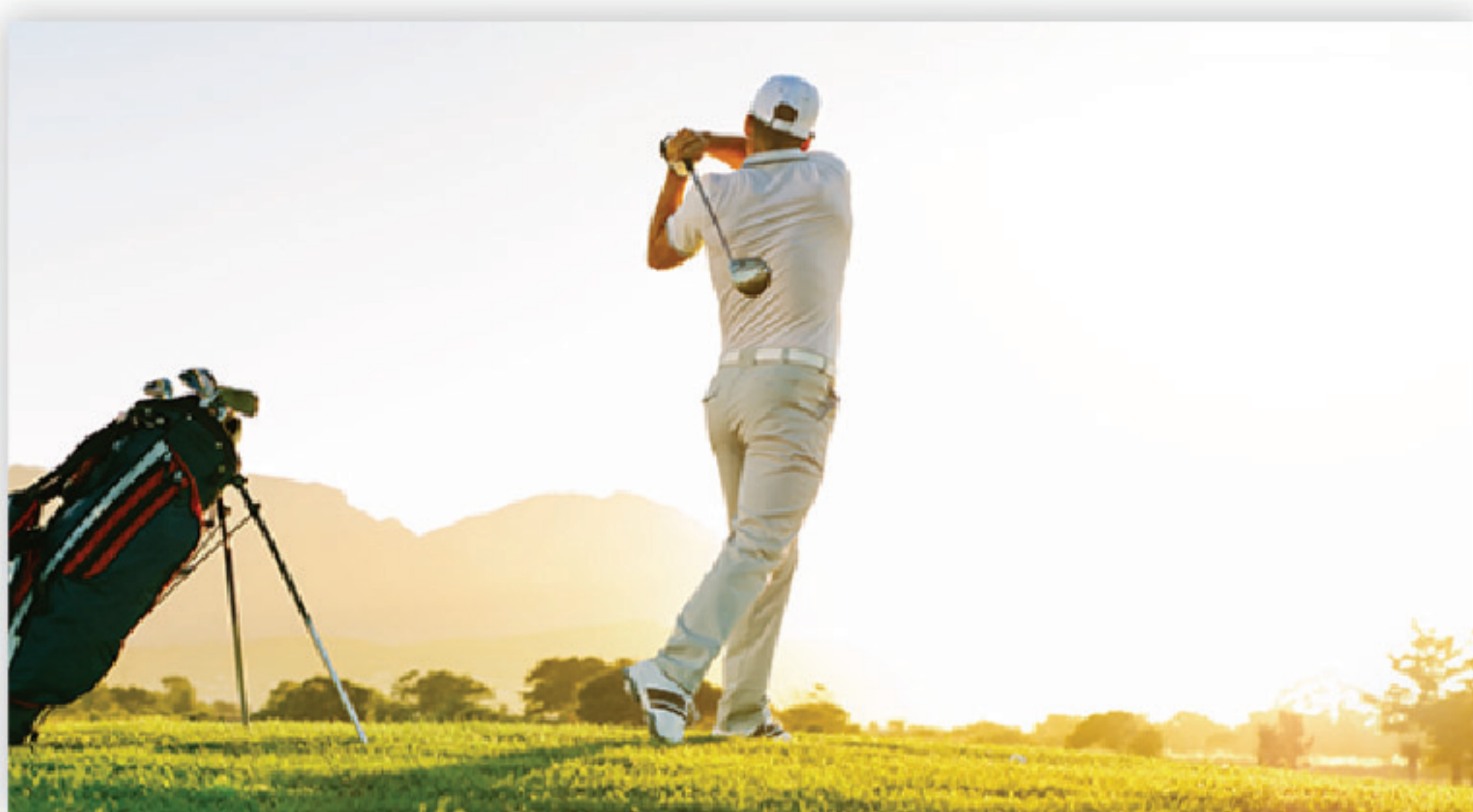
CODEVISION MONITORING PLATFORM

| Production Quantity | Average Length (m) | Number of Abnormal Situations | Progression Time |
|---------------------|--------------------|-------------------------------|------------------|
| 10000 | 1.5 | 0 | 10:00 |

PT 9 O'CLOCK SERVICE & APPLICATION



GYM EQUIPMENT EXERCISE DATA CONSTRUCTION PROCESSING



PET CAT, ACCESSING THE LITTER BOX, VIDEO DATA CONSTRUCTION / PROCESSING



codevision.kr/en



Instagram



CODEVISION Inc.

Autonomous AI Agent Company

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