Based on **stability** and **trust A total IT service provider** that delivering optimal solutions

Providing Ultimate Solution



Headquarters

23, Alpha City 1-ro 35-gil, Suseong-gu, Daegu (Daheung-dong), Daegu, 42250, Republic of Korea

Tel. +82 53-812-3008 Fax. +82 53-813-8038

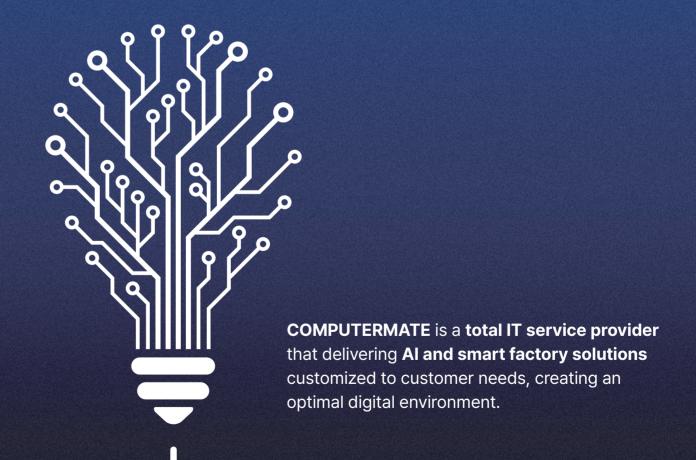
Gyeonggi branch Room 509, 5th floor, Dongtan IT Tower, 878 Dongtansunhwan-daero, Hwaseong-si, Gyeonggi-do,

18469, Republic of Korea **Tel.** +82 31-376-3379 **Fax.** +82 31-376-3019

Sales Direct +82 70-8856-4079 / +82 70-8856-4088 / sales@computermate.co.kr

Website.www.computermate.co.krBlog.blog.naver.com/computermateAl Demo.ai.computermate.co.kr





Providing The Ultimate Solution

COMPUTERMATE Co., Ltd. is a total IT service provider delivering Customized Business Solutions specialized for diverse industries based on Cutting-edge IT technology. We accurately identify our clients' needs and design optimized IT strategies to realize them, supporting digital transformation and enhancing competitiveness. Additionally, by implementing Al solutions and smart factories, we provide smart solutions that elevate productivity, efficiency, and quality to new levels. Through these technologies, we assist in driving business innovation and establishing a stable digital environment for long-term growth. By implementing AI technology, we deliver data-driven intelligence and automation and create new value for our clients' businesses. We maximize operational efficiency through Al-based predictive analytics and real-time data processing technologies, offering customized AI and MES solutions to enhance competitiveness in manufacturing and other industries. This enables us to support our clients in achieving continuous growth in a rapidly changing market environment.

Since our founding in 1992, we have been accelerating digital transformation through customized technical support and consulting that meet clients' unique needs. With a dedicated technology research center and continuous investment in R&D, we drive digital innovation to foster longterm growth and position ourselves as a trusted partner for our clients.

Company Overview

CEO	Sangin Seo, Sungho Kim	Founding date	Originally Established in 1992 (Incorporated in 2007)
Capital	100 million KRW	Credit rating	BB+ (NICE Information Service)
Patent	Method for Managing the Production of Rubber Products Cloud-based Smart Factory Operation System for Automotive Parts Industry using Big Data Analysis Electronic Devices and Control Methods	GS Certification	Enterprise Resource Planning System v4.0 MATE-ERP v4.0 Software for Rubber Mixing Process Control MATE-ERP C#.NET v1.0 MATE-MES.NET v3.0

Business Area

IT Solution Development and Consulting

MATE Series

- · MFS
- · MES for Cloud
- . FRP · F-HR
- · SCM
- · Groupware
- · OMS
- · POP · WMS
- · Initial-In-Process-Final Product Management
- · Compounding Management System
- · Biztime (Time card management solution)

Al Series

- · ADUP (Anomaly Detection Universal Platform)
- · AD (Anomaly Detection)
- · OPC (Optimal Process Conditions)
- · QP (Quality Prediction)
- · TMS (Test Management System)
- · CPS (Cyber-Physical System)

Data Analysis and Management

- · BI (Business Intelligence)
- · DA (Data Acquisition)

IT Infrastructure

Server Supply and Maintenance

On-site Equipment Supply and Maintenance

Smart Factory and DX(Digital Transformation)

Smart Factory Consulting

Data Voucher Program

Development Program

Al Voucher Program

Metaverse Factory Program

Smart Factory Expansion Program

AI-Powered Data Infrastructure

Cloud Service Usage Support Program

DX (Digital Transformation) Consulting

Al-Manufacturing Convergence Consulting

· Barcodes, Scanners, Kiosks, etc.

Cloud Services

· AWS, AZURE, NAVER, KT, etc.

Network and Data Collection Installation

IoT Installation and Maintenance

IT Services

IT Planning and Diagnostic Consulting

- · Quick Assessment

Customer Support Services

- System Maintenance
- · Infrastructure Maintenance (H/W, N/W, Various

Training Services

- · Free Training for Maintenance Customers
- IT System and Technical Training (Paid Service)

MATE-AI for ADUP (Anomaly Detection Universal Platform)



Product Overview

Mate-Al for ADUP (Anomaly Detection Universal Platform) resolves atypical defect detection and false defect issues in rule-based vision inspection and can be adapted for other industries and product types through generative AI techniques and a universal platform, providing Al reliability and efficiency.

Key **Features**



Generative Al-based Dataset Construction



Profile Management System for Universal Diffusion



Efficiency



Enhancement by Transfer Learning



Model Management (MLOps) and Visualization

Transfer Learning

Using Pre-trained Model(Other Parts)

Generates Models in Consumer

Demand for Customization Verifies and Generates New Models

Profile Management

- Profile Management System for Universal
- Inspection Information and Item Management for the Universal Diffusion of Other Parts

Image Processing

- Image Enhancement Using Filters such as Homomorphic, Histogram Equalization, etc.
- Improves Accuracy by Image Processing for Anomaly Detection



Dataset Construction

- Generative Al-based Augmentation (GAN)
- Makes Use of Transform
- Using Data Annotation in Test Dataset



Automated Data Collection

- Automated Data Collection Using TCP/IP
- Logs are Stored in the Al Server to Retransmit Failure Data

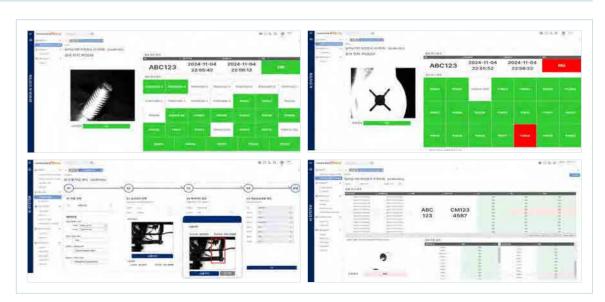
Model Management

- Periodically Generates and Releases
 - New Models by Retraining - Push the Best Model after Retraining

Visualization

- Defect Detection Using Visualization - Visualization of Model Performance
- Monitoring Inspection

Screen Examples



MATE-AI for QP (AI Solution for Quality Prediction)



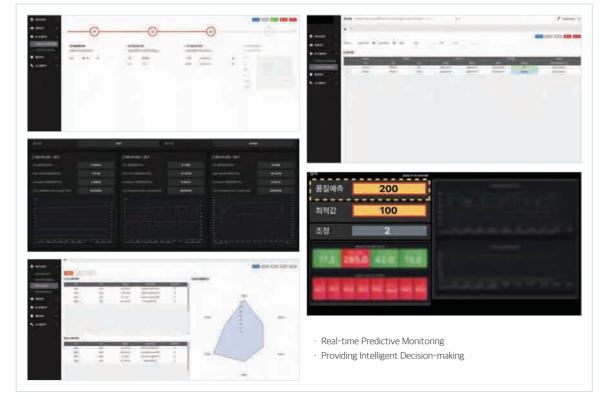
Product Overview

MATE-Al for QP(Quality Prediction) offers Al-driven quality prediction services leveraging process data. As a quality prediction Al solution, the Al model trained on process data delivers real-time quality predictions for active processes. It also features Al model training management capabilities to continuously improve the quality prediction Al solution.

Key Features



Screen Examples



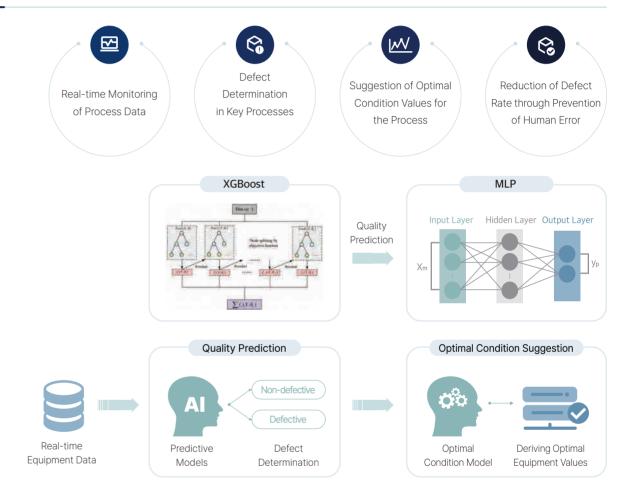
MATE-AI for OPC (AI Solution for Optimal Process Conditions)



Product Overview

MATE-Al for OPC (Optimal Process Conditions) is an Al solution that provides optimal condition values for equipment. As an Al solution that delivers optimal process conditions, its Al model offers real-time process condition values for quality prediction based on equipment data. This solution supports the foundation for a Digital Twin.

Key Features



Screen Examples



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MATE-AI for TMS (Test Management System)



Product Overview

MATE-Al for TMS(Test Management System) enables Al-driven scheduling for comprehensive monitoring of testing processes. As a test management system, it delivers real-time monitoring of equipment utilization rate and operational performance based on Al-driven test planning. It also provides reliable test services through deep learning-based automatic performance aggregation and analysis.

Key **Features**



Al-based Optimal Test Scheduling



Quantification and Visualization of Test Data



Deep Learning-based Automated Data Acquisition for Test Results



Response to Test **Equipment Abnormalities** and Emergency Situations



1. Test Request

- · Master Data
- · Test Conditions · Special Notes
- · Test Types



2. Test Registration

- · Review of Test Information
- · Review of Test Schedule · Confirmation of Test
- Registration



3. Test Execution

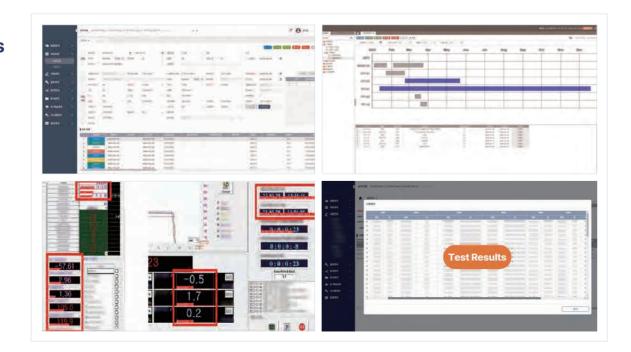
- Test Environment Setup
- · Situation Monitoring · Collection of Test Data
- · Derivation of Test Results



4. Test Completion

 Issuance of Test Report · Notification to the Client

Screen **Examples**



MATE-AI for AD (Al Solution for Equipment Anomaly Detection)



Product Overview

MATE-Al for AD(Anomaly Detection) detects real-time anomalies using Al and notifies operators. As an Al solution equipment anomaly detection, it detects and notifies in advance about equipment stoppages, failures, repairs, and replacements to prevent production delays. The system provides comprehensive management of equipment with a predictive alert system.

Key **Features**



Collection of Key Equipment Performance Parameters Data



Model Retraining and Evaluation



Al-based Equipment Anomaly Detection and Alerts



Sensor Data-based Equipment Failure Prediction









Anomaly Detection Monitoring

Anomaly detection and alerts for test equipment

Reducing downtime caused by interruptions or halts in product testing

MATE-CPS (Cyber-Physical System)



Product Overview

MATE-CPS(Cyber-Physical System) constructs a 3D-modeled virtual environment replicating real-world production sites. Based on real-time process data collected from the production site, it synchronizes the virtual site, visualizes and monitors the operational status, and sends alerts in the event of abnormalities, making it easier to manage manufacturing processes.

Key **Features**



3D Factory Layout Similar to the Actual Production Site



Easy Recognition of Actual Factory Components



Easy To Grasp the Overall Status through Real-time Data



User-customizable Layout Adjustments for Equipment Position Changes

Screen **Examples**



Inventory Status Environmental Status Information (IoT Data)



Equipment Status Information (PLC Data) Inventory Status Information (Inbound and Outbound Data)

Production Status Information (Performance, Defects, Downtime Data) Environmental Status Information (OpenAPI Data)

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