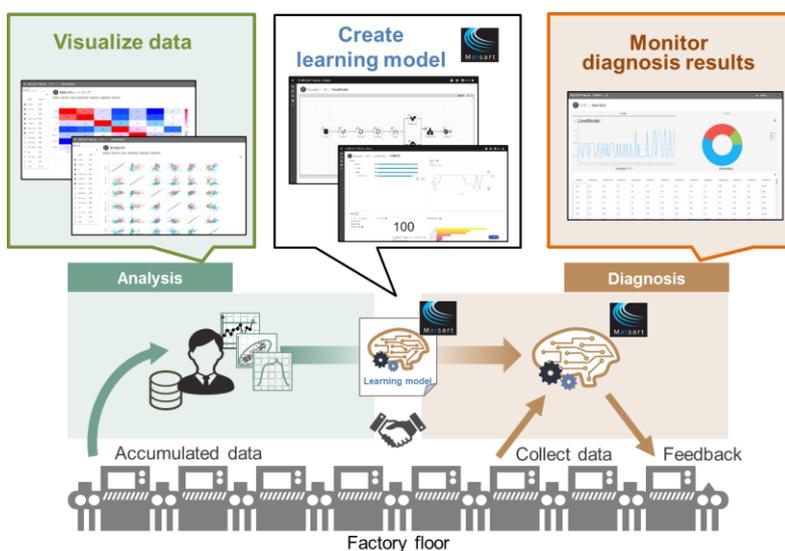# Mitsubishi Electric to Launch Data-science Tool that Helps Non-specialists Skillfully Manage Factory Operations for Enhanced Productivity

Mitsubishi Electric Corporation (TOKYO: 6503) announced it will launch MELSOFT MaiLab, a data-science tool that uses the company's Maisart® AI technology to enable non-specialists to skillfully and easily analyze and diagnose factory data such as current and pressure values for intuitive, high-level management of production operations.

In recent years, manufacturers are increasing the use of various data from the factory floor to further enhance productivity, which is stimulating needs for data collection and visualization as well as advanced analysis and diagnosis. On the other hand, a number of factory operations like production management and equipment maintenance still need to be handled by human workers, making tasks such as equipment adjustments and consumables-replacement timing, etc. dependent on the experience of skilled workers. The lack of such skilled workers, however, is becoming a critical issue for manufacturers when they try to promote advanced data analysis and diagnosis.

MELSOFT MaiLab enables non-specialists to perform expert-level factory-data analysis and intuitive production management

Mitsubishi Electric's MELSOFT MaiLab tool utilizes AI technologies like deep learning and other statistical methods to automatically learn how skilled workers evaluate operations, which enable this tool to be handled very easily without requiring any special knowledge of factory operations. After the automatic learning process, the analysis and diagnosis results will be fed back from MELSOFT MaiLab for adjusting equipment parameters, which helps manufacturers automatically improve their operations and further increase productivity. Going forward, the tool's functionality and AI technologies incorporated will be updated in response to the growing needs of manufacturers.

The launch of MELSOFT MaiLab is part of Mitsubishi Electric's ongoing effort to support customers with digital technologies that can help streamline production processes and reduce engineering costs. Through such activities, Mitsubishi Electric aims to transform into a "circular digital-engineering company" that is focused on solving a wide range of social issues together with its customers.

Key Features

1) Automated learning process allows non-specialists to analyze and diagnose production data for improved productivity

- Automated machine learning (AutoML), an AI automated-learning function, realizes data analysis and diagnosis and gives automatic feedback to equipment for improved productivity without requiring users to possess data-analysis expertise.
- The AI generates learning models to help inexperienced workers perform equipment adjustments at similar levels as specialists by monitoring factory data and how skilled workers evaluate operations to adjust the parameters in production equipment.

2) Supports intuitive operation and easy analysis/diagnostics with rich graphic displays

- Various graphs like correlation matrix heat maps and scatter plot matrix are available to visualize factory data, supporting intuitive operation and easy data analysis.

- Results of the AI diagnosis can be shown as bar graphs and pie charts for intuitive understanding.
- Tablets can be used to check production status remotely.

MELSOFT MaiLab displays factory data and analysis/diagnosis results

License types and lineup

Item	Product name	License
MELSOFT MaiLab – base license (new)	SW1DND-MAILAB-MQ12	Annual
MELSOFT MaiLab – base license (updated)	SW1DNN-MAILABRE-MQ12	Annual
MELSOFT MaiLab – additional user license (new or updated)	SW1DNN-MAILABAN-MQ12	Annual
1 additional diagnostic license	SW1DND-MAILABPR-M	Perpetual
5 additional diagnostic licenses	SW1DND-MAILABPR-MA5	Perpetual
10 additional diagnostic licenses	SW1DND-MAILABPR-MA10	Perpetual

About Maisart

Maisart encompasses Mitsubishi Electric's proprietary artificial intelligence (AI) technology, including its compact AI, automated-design deep-learning algorithm and extra-efficient smart-learning AI. Maisart is an abbreviation for "Mitsubishi Electric's AI creates the State-of-the-ART in Technology." Under the corporate axiom "Original AI technology makes everything smart," the company is leveraging original AI technology and edge computing to make devices smarter and life more secure, intuitive and convenient.

Trademarks and Patents

MELSOFT Mailab and Maisart are registered trademarks of Mitsubishi Electric Corporation in Japan and other countries. MELSOFT Mailab has patents pending.

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Originally (initially) released in English

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https://www.mitsubishielectric.com/fa/support/index.html