TOSHIBA

Toshiba's AI Technologies

Here, we will introduce the AI technologies that Toshiba has researched and developed for many years.
A variety of these AI technologies are presented on the website, classified into categories such as media data analysis and anomaly detection.

For details, please refer to the "Toshiba AI Technology Catalog" website.

https://www.global.toshiba/ww/technology/corporate/ai.html

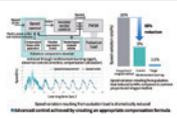
Placement and Design

Scalable technologies for deep neural networks

Provide AI models suited to calculation capacity in execution environments without retraining.

Operation and Control

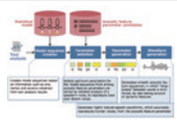
Automatic construction of Permanent Magnet Synchronous Motor (PMSM) drive logic using reinforcement learning



RL expects to achieve advanced control using a data-driven approach.

Speech dialogue/Media transformation/Media generation

RECAIUS™ speech synthesis technology



Improves naturalness and speaker similarity of synthesized voice using a speech synthesis method based on statistical parameter selection.

Anomaly detection/Media data analysis

Inspection technology with the no-defects learning system

Enables rapid automation of inspection processes and increased inspection accuracy through AI image inspections using the "no-defects learning" approach.

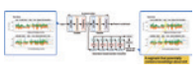
Operation and Control

Optimizing electric power market transactions

Proposes transaction strategies that take into account the uncertainty in prediction of renewable energy generation volumes and market prices.

Sensor data recognition/Status estimation/Numerical analysis/Indexing

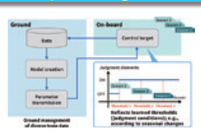
Technology for comparing the work of skilled workers and beginners



Automatically identifies skilled workers and beginners.

Operation and Control

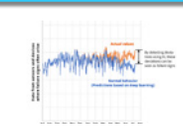
Automated machine learning for train A/C operation models that adapt to changes in the environment



This technology helps to provide comfortable spaces on trains in keeping with changes in the environment (e.g., seasonal changes).

Anomaly detection

Facilities failure sign detection technology: Detects deviations from normal behavior



This technology can detect signs of failure, even in facilities data with complex changes resulting from controls.

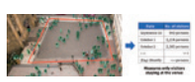
Numerical prediction/Numerical analysis

Disease risk prediction

Apply machine learning to large amounts of health checkup data to predict risks of diseases.

Media recognition/Media data analysis

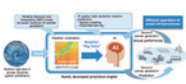
Estimation technology for the number of visitors to an event venue



Measures visitors to events in open venues.

Numerical prediction/Probability prediction

Predictive technologies using weather simulations



Accurately predict electric power demand and renewable energy generation volumes.

Media recognition/Media data analysis

Few-shot object detection

Image recognition AI detects new objects with unprecedented accuracy, quickly and easily, by registering a single image.

The above are just a few examples. Many AI technologies are introduced on the website.