Computermind

RZ Ecosystem Partner Solution

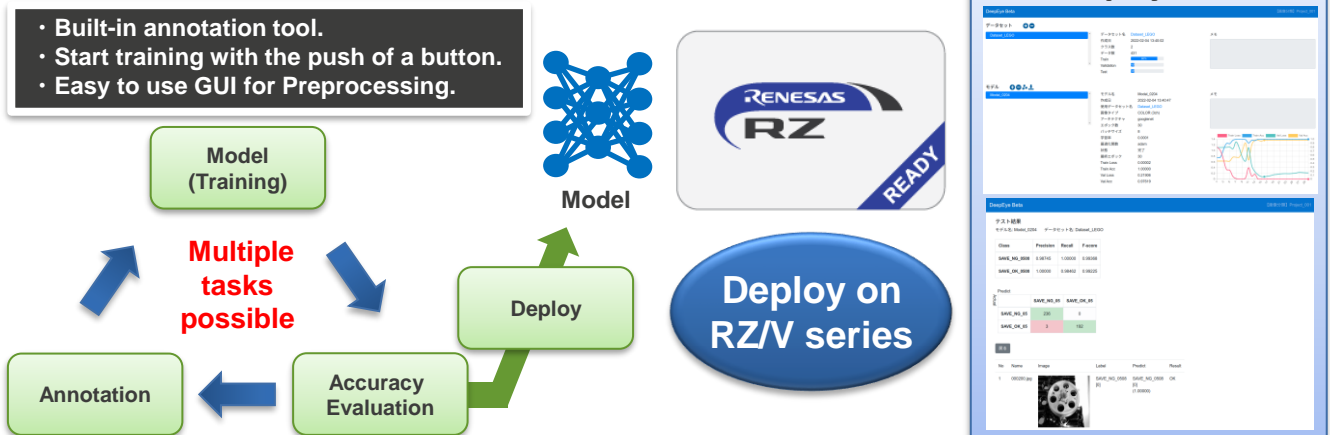# Computermind DeepEye AI Model

RENESAS RZ READY

Solution Summary

Based on 30 years of software development experience, DeepEye is a software developed by combining advanced technologies such as machine learning,and even engineer without AI development experience can easily deploy AI models. It seeks real-time performance by co-working with RZ/V series.

Features / Benefits

- **No requirement on prior specialized knowledge of AI / Machine Learning**
  - An AI model can be developed by using a simple GUI and easy to understand steps without any prior AI/machine learning knowledge.
- **Features needed to improve AI accuracy are available by default.**
  - Support different pre-processing functions such as splitting and data bulking.
- **Supports various platform**
  - It operates in various environments such as Windows, Linux and Cloud.

Diagrams / Graphics

- **Built-in annotation tool.**
- **Start training with the push of a button.**
- **Easy to use GUI for Preprocessing.**

Model (Training)

Multiple tasks possible

Model

RENESAS RZ READY

Deploy on RZ/V series

DeepEye GUI

Deploy

Annotation

Accuracy Evaluation

Main Detection Tasks

| Visual Inspection | Human Detection | Vehicle Detection | Character recognition |

Target Markets and Applications

- Visual inspection of industrial parts, etc.
- Detection of people, cars, etc. in marketing.
- Optical character recognition (OCR).

- Installation check of electronic boards, etc.
- Workplace safety monitoring.
- Determination of growth of cells, etc.
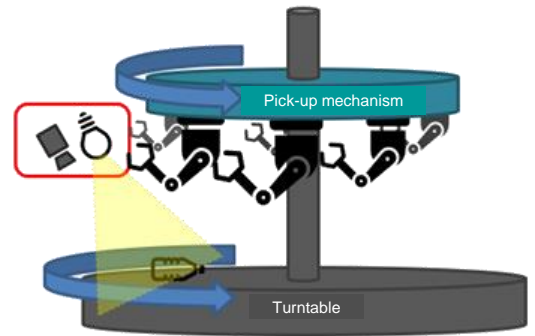
https://deepeye.jp/

2022.06

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Plastic bottle detection system

The garbage flowing on the round conveyer belt is captured with a fixed camera, and from among the plastic garbage, We used [DeepEye] to detect PET bottles using AI models.

By using object detection, the center coordinate of the plastic bottle can be detected, and the robot arm installed on the ceiling surface of the device picks up the plastic bottle and separate it for recycling.

By developing object detection model using [DeepEye], any changes needed for optimizing the performance can be easily performed by the client, including future updates.

In addition to above, deploying AI models to an RZ / V series board is supported, and AI environment development using AI edge devices. It is speedy and easy to build.

Pick-up mechanism

Turntable

About Computer Mind

Our company's service not just include AI solution but also provide complete solutions in peripheral software development.

Name:	Computer Mind Inc.
Founded:	August 8, 1991
Industry:	Software development
Employees:	160 (Kofu: 75, Tokyo: 75, Okinawa: 10)
	140 software engineers (AI: about 20)
Certification:	ISO9001, ISO/IEC27001, ISO5230

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https://www.compmind.co.jp/en/

Solutions and services provided by our company

Control System
- Application
- Firmware
- Middleware
- Device driver
- Real time OS
- Communication

Professional-use
- Desktop application
- Web application
- iPhone/Android
- Cloud
- Communication Network

Advanced technology
- Deep learning
- Machine learning
- Data mining
- GP GPU (CUDA)
- 3D point-cloud data (SLAM, etc.)
- Reinforcement learning Imitation learning

Mathematics/statics-Team
- Dissertation investigation, implement, evaluation
- Optimization for algorithm
- Speed-up for processing