Immediate use in your application without any AI knowledge or AI tools

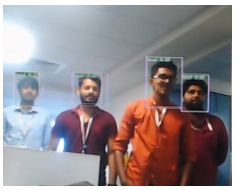
Renesas RZ/V Pre-Trained AI Library

AI application development requires different tools and know-how compared to conventional MCU/MPU development. Due to many new tools and know-how that are constantly releasing into the market, some customers face difficulty in using AI to value-add their products.

To enable users to easily use AI even without any previous experience with AI, simply integrate Renesas RZ/V Pre-Trained AI library into user applications. Both training data and AI models are using an open source, and can be used free of charge for both evaluation and mass production.

Pre-Trained AI Library List

Human Head Counting



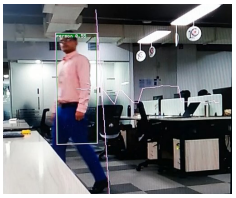
Function	Count the number of people heads
AI Model	YOLOv3
Performance	3 fps
Accuracy	96% (mAP @0.50 threshold)
Image Input	Camera input or Image data
Applications	Conference rooms, elevators, etc.

Safety Helmet and Vest Detection



Function	Helmets and safety vests detected
AI Model	YOLOv3
Performance	3 fps
Accuracy	84% (mAP @0.50 threshold)
Image Input	Camera input or Image data
Applications	Factories, construction sites, etc.

Line Crossing Object Counting



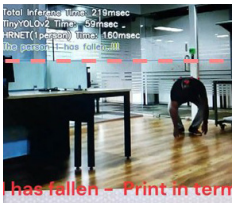
Function	Count passing the decision line
AI Model	TinyYOLOv2
Performance	13 fps
Accuracy	n/a (Depends on image data and environment)
Image Input	Camera input
Applications	Stores, Automatic Door, etc.

Age and Gender Estimation



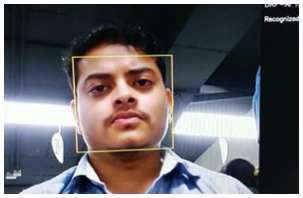
Function	Age estimation and gender detection
AI Model	ResNet18 (Age), ResNet50 (Gender)
Performance	27 fps (Age), 11fps (Gender)
Accuracy	75.73% (Age), 90% (Gender)
Image Input	Image data
Applications	Marketing, Entertainment, etc.

Elderly Fall Detection



Function	Detection of falls, bending and crouching
AI Model	TinyYOLOv2 + HRnet
Performance	5 fps
Accuracy	n/a (Depends on image data and environment)
Image Input	Camera input
Applications	Station, Hospital, Care facility, etc.

Face Detection and Spoof Detection



Function	Registered face detection and spoofing detection
AI Model	ResNet-50
Performance	11 fps
Accuracy	81% (obtained during fine tuning)
Image Input	Camera input or Image data
Applications	Admission and Exit Management, etc.

How to Get

Download these libraries at no charge from the URL below.
Get technical support by clicking on the "Discussion" tab in Github.

https://github.com/Ignitarium-Renesas/RZV2L_AiLibrary

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