

RZ/V AI Apps

ELEVATOR PASSENGER COUNTING

The Elevator Passenger Counting sample application uses the AI SDK, an AI software development kit for RZ/V. This application can count the number of people in an elevator and is able to detect human heads with high accuracy due to the large number of valid images used during pre-training. This system can also be used in security and crime prevention by transmitting the elevator's interior view to the building's host computer.

Features

- Counts the number of passengers with high accuracy
- Enables simple detection from a ceiling mounted camera
- Can be used free of charge for both prototyping and mass production as it is composed entirely of open source software

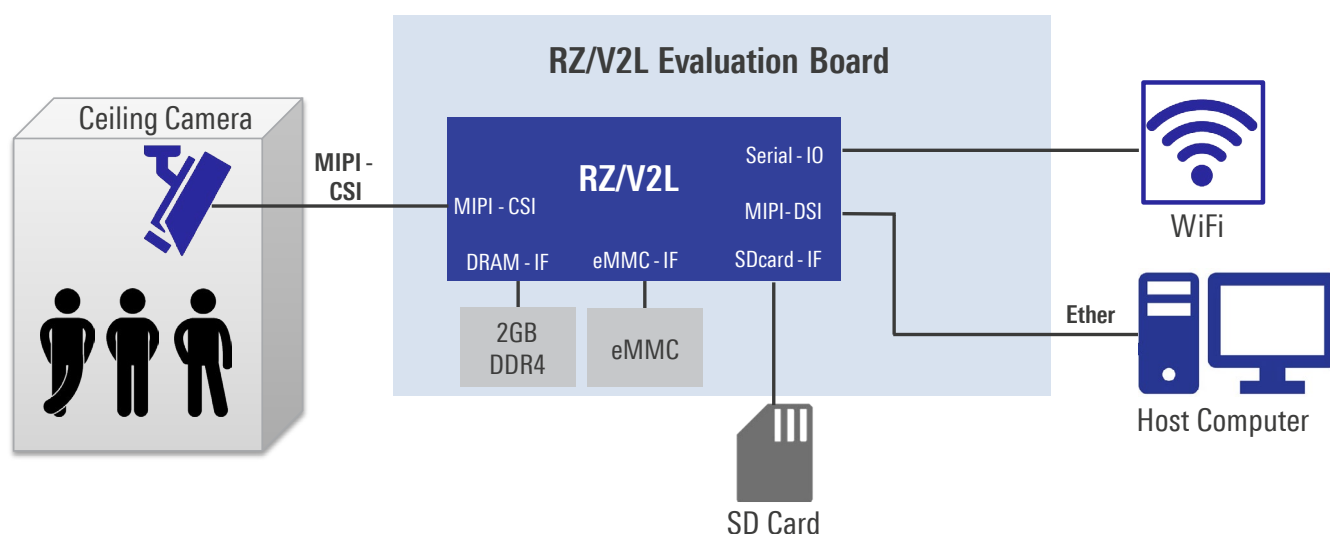
Benefits

- Determines if the number of passengers in the elevator exceeds capacity
- Operation can be started by detecting when a person has boarded the elevator
- Detects the presence of occupants in the event of emergency situations

Applications

- Building Automation
- Elevator Management
- Security Systems

Block Diagram



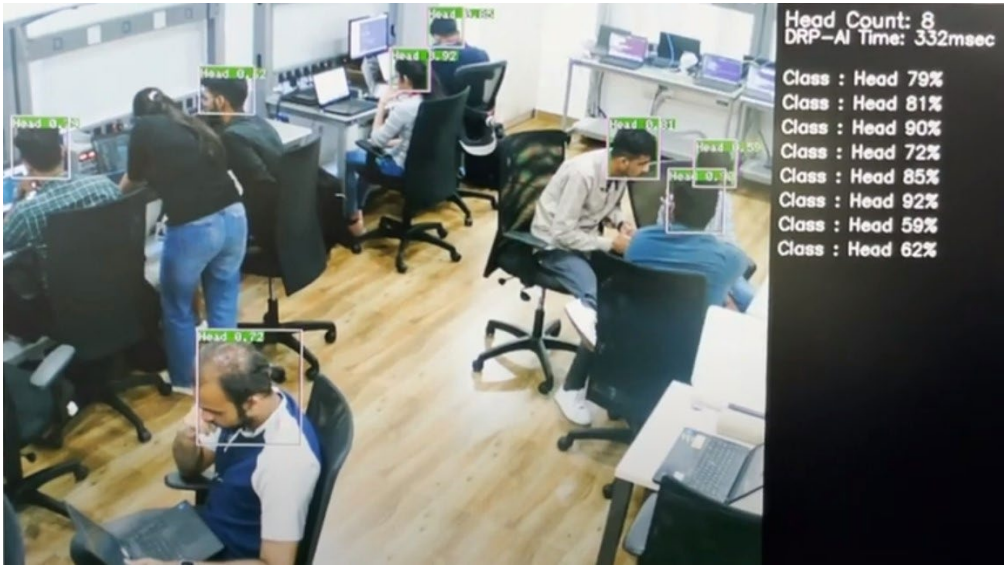
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Software

This application is used to count the number of human heads present in a still image or video input. To utilize the API, "PRET_HC()" function provided in this library, input to this API is an image buffer address, along with the image height and width.

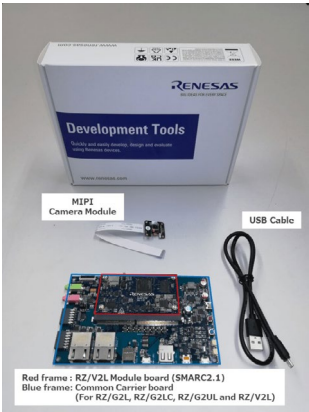
AI Model	YOLOv3: An Incremental Improvement
Datasets	*HollywoodHeads *Head_data *RGBD_Indoor_Dataset *SCUT Dataset
Accuracy	84.96% mAP (using 100 test images)

Demonstration Image



Tools & Support

- RZ/V2L Evaluation Board Kit



Ordering Information

This solution can be downloaded free of charge from Git Hub at [Elevator Passengers Counting](https://github.com/renesas-rz/rzv_ai_sdk/).

For more details, please visit: renesas-rz.github.io/rzv_ai_sdk/