

RZ Ecosystem Partner Solution

MOSCHIP Action Recognition with Pose Estimation



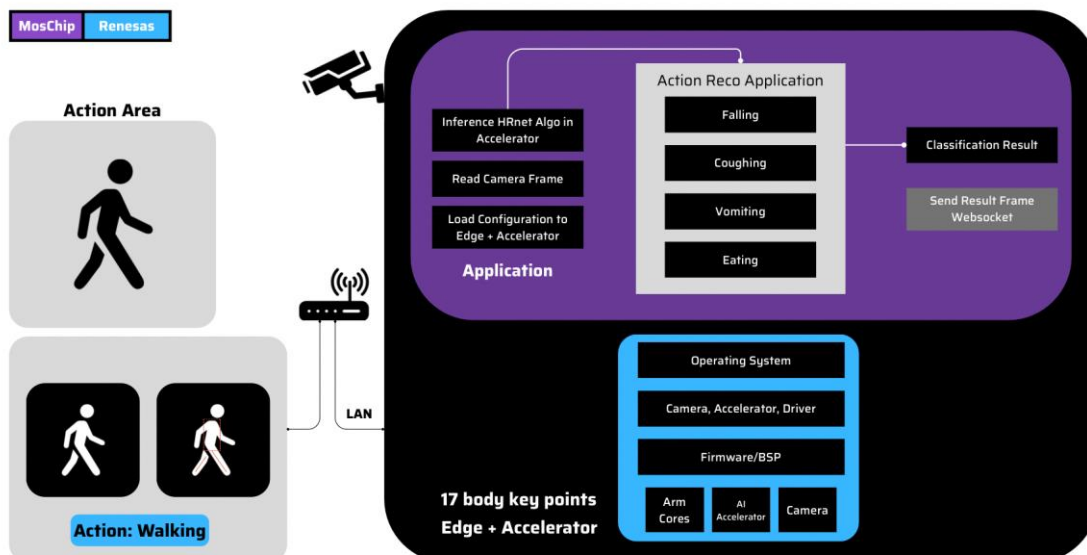
Solution Summary

Action Recognition with pose estimation solution is developed and inferenced using [RZ/V series](#) vision MPUs with DRP-AI acceleration. This solution recognizes persons actions with body key points from HRNet inferenced on DRP-AI. Actions were defined with certain body actions such as fallen, panic expressions, sick, eating, etc. This application can be inferenced using the [RZ/V2MA vision board](#).

Features/Benefits

- Pretrained HRnet with 80% accuracy for generating key human body points
- Actions defined with training and test method for body key points
- Action recognition with body points system inferenced with 90% accuracy
- Comprehension of HRnet pose estimation key points and devise an algorithm capable of detecting actions such as falling, coughing, eating, and vomiting
- Application for performing action recognition on an Edge AI accelerator, enabling inference of the algorithm and conducting post-processing to display outputs
- Inference successfully performed on an Edge AI accelerator with a fast inference time of 50 ms at a speed of 10 FPS for defined actions

Diagrams/Graphics



Target Markets and Applications

- Surveillance Camera at ATM



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- Image Capture & Optimization
- Vision Analytics & Processing
- Optical Character Recognition

ML LIFECYCLE MANAGEMENT

- MLOps - Automated ML Pipeline Deployment
- Model Designing, Optimization, Testing & Porting
- Inference Engines & Metrics
- ML Transfer Learning Framework
- Data Augmentation & Annotation

COGNITIVE COMPUTING

- Deep Learning & Neural Networks
- AI/ML on Edge & Cloud
- ML Application Acceleration
- Cross Platform Porting & Integration
- Natural Language Processing (NLP)

AI/FPGA ACCELERATION SOLUTIONS

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- Predictive Analytics
- Audio Analytics & Key-phrase Detection
- Face Recognition
- ML Reference Designs & POC

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