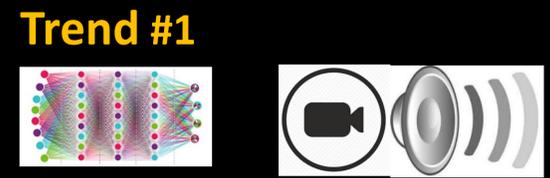


# VISION SENSING AT THE EDGE

# PERFORMING MACHINE INTELLIGENCE JOINTLY

# KEY RESULTS



Complex Processing Pipelines



Vast amounts of resource-constrained sensors

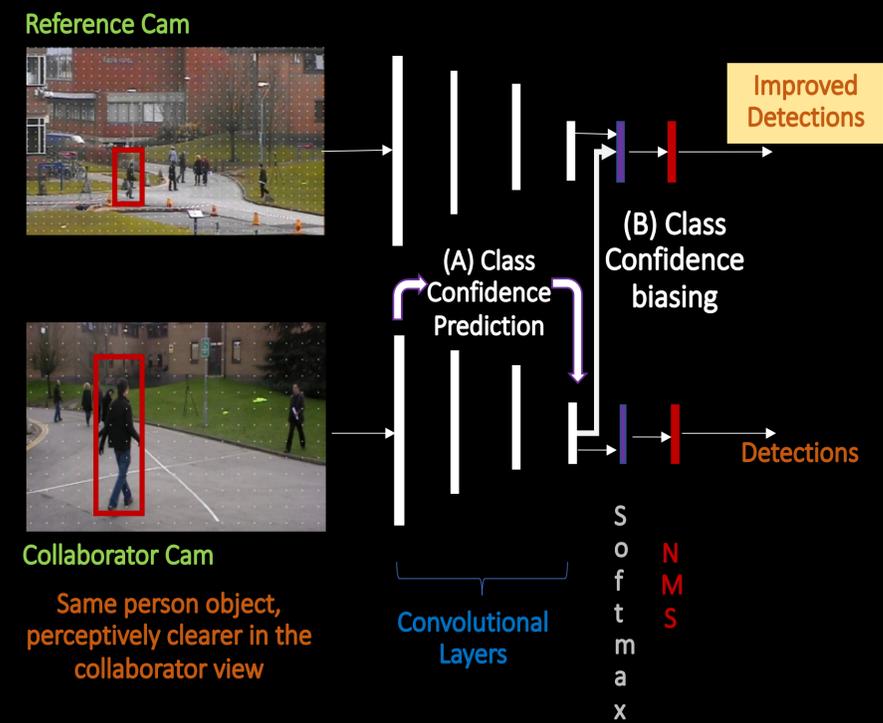
## Key Resource & Performance Bottlenecks

- Latency of complex DNN execution
  - 550 msec+ for person recognition on a NCS
- Low Accuracy
  - Individual sensors subject to environmental artefacts



IoT nodes share their computational state **during execution** for improved accuracy on low-end DNNs

## COMAI DESIGN



- (A) Class Confidence Prediction**
  - Collaborator makes a **fast and shallow prediction** of its output based on early hidden layer states
- (B) Confidence Biasing**
  - Reference camera exploits **sensor multiplicity** for improving accuracy

