

Edge AI



AI ENGINE ON EDGE PLATFORM – SMART HOME APPLICATION

Enabling intelligence on an edge Microprocessor to assist cloud based AI engine

Scope

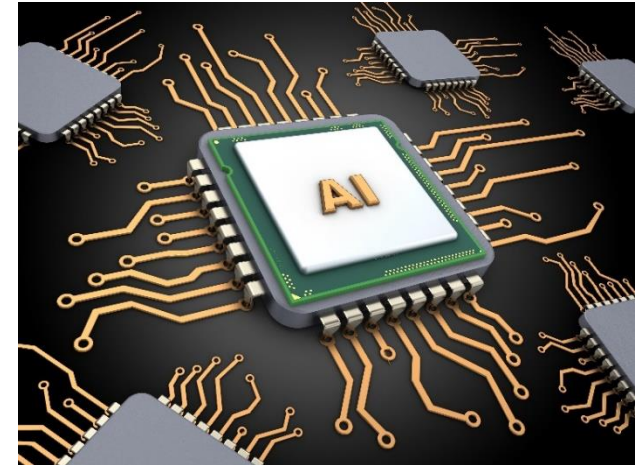
- Porting real time AI applications on MCU Platform
- Optimizing AI algorithms for porting on low memory footprint devices
- AI based Gesture detection, User Posture recognition, Sound Analytics, Expression detection, Footstep detection etc.
- Optimization and simplification of AI inference engines retaining the accuracy
- Creating a demo setup to showcase the capabilities

Challenges

- Real time response
- Data set collection, cleansing, and segregation
- Optimization of algorithm to run on an embedded system

Tools & Framework

- TensorFlow, TensorRT
- Keras



Market	Business Benefit	Delivery model
Smart home, Surveillance	Distributed computing, Data Privacy	ODC

EDGE AI FOR PREDICTIVE ANALYSIS - INDUSTRIAL AUTOMATION

Enabling Analytics at the Edge for Wafer Production Process

Scope

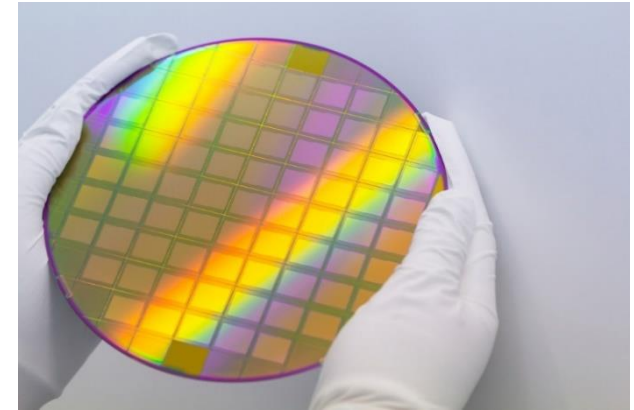
- Porting Ultra light DNN algorithm on a microcontroller
- Analysis of Conveyer belt operation, robotic gear movement
- Using rotary vibration history data for predicting abnormal and normal gear operations
- Implementing Predict Failure and triggering Schedule maintenance

Challenges

- Motor vibration analysis under different load conditions
- Anomaly detection in less than 0.10 sec

Tools & Framework

- TensorFlow, TensorRT
- Keras, PyTorch



Market	Business Benefit	Delivery model
Industrial Automation	Improved Productivity	ODC