

ALTEN Global Technologies



QUALITY



ALTEN Global Technologies

(Formerly Accord Global Technology solutions Pvt. Ltd.)

ISO 9001:2015
AS9100:2016 Rev D
CMMI Level 5 V2.2



Artificial Intelligence / Machine Learning Offerings

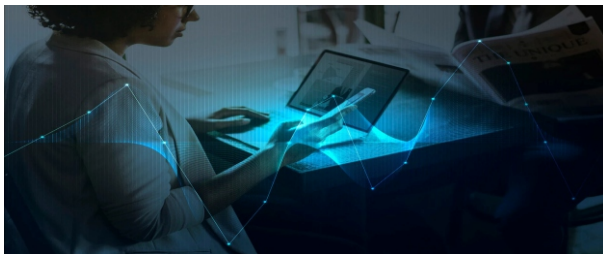
Our Services



Deep Learning Apps



Image/Video Analytics



Data Analytics

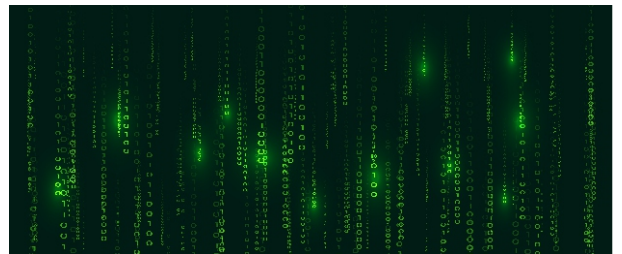
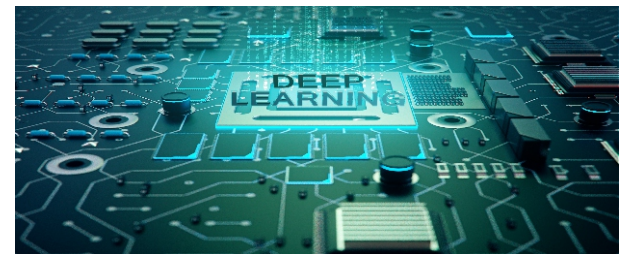


Image Processing



ML Model Development



EDGE Embedded System Deployment



NLP



AI as a Service

Competencies



Deep Neural Networks and Convolutional Neural Networks



Machine Learning Algorithm Design and Development



Traditional Image Processing Algorithms and Applications



EDGE Computing Leveraging CUDA and cuDNN



Logistic Regression and Neural Network based Data Analytics



Natural Language Processing – Text Recognition

Deep Neural Network Application Casestudies

Aerial Obstacle Detection and Surveillance

- Image Pre-processing
- Object Detection, Recognition and Identification
- Object Tracking
- >30 FPS Throughput on Edge Platforms



Number Plate Recognition

- Advanced Number Plate Recognition
- Vehicle Tracking
- Wide Angle Coverage and Low Light Detection



Drone Video Analytics

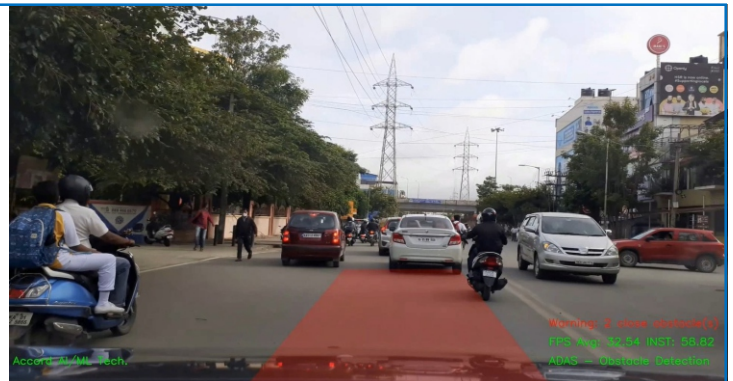
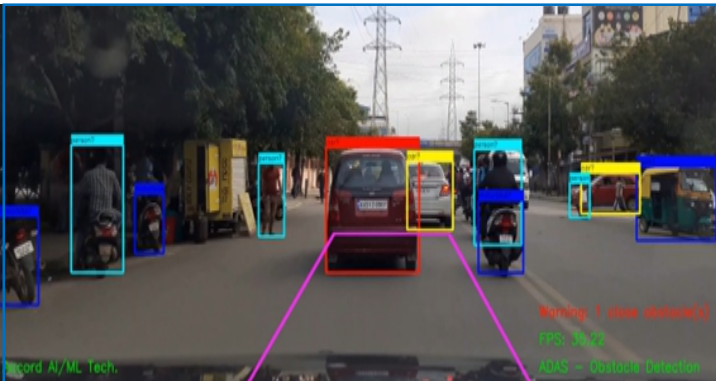
- Object Detection for Counting Applications
- 12x Digital Zoom
- >30 FPS Throughput on Edge Platforms
- Tiny Object Detection Capability



Automotive – ADAS – Driver Behaviour Monitoring System

- Blink Detection, Head Pose Detection, Yawn Detection
- Driver Drowsiness Alerting
- Loss of Focus Detection
- Deployment on EDGE

Deep Neural Network Application Casestudies



Automotive – ADAS – Collision Warning System

- 80 classes of Object detection & Obstacle Analysis
- Instantaneous Collision Alerts
- Event Logging
- Real Time Performance on EDGE Platforms

Machine Learning Application Casestudies



Horizon Detection System

- Machine Learning based fast Horizon Detection
- Algorithm Can be used in AHRS and Ships
- Image Stabilization and Image Zooming Features inbuilt in System
- Panorama Wide Vision Technique

Handcrafted Image Processing Application Casestudies



a) Original Image



b) ABCOHC



c) AGC



d) BBHE



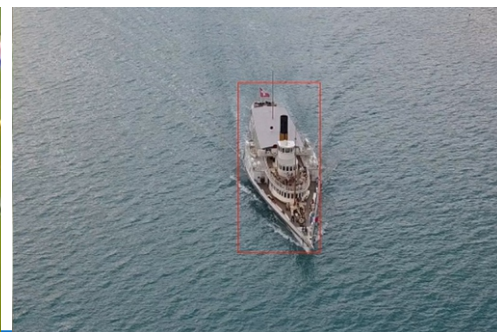
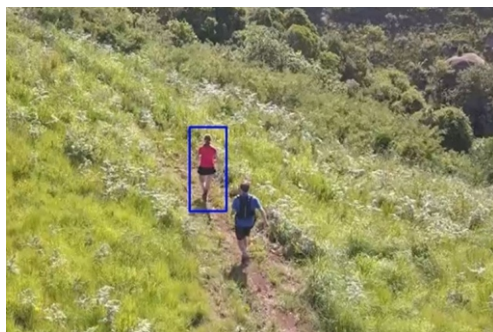
e) CLAHE



f) DSIHE

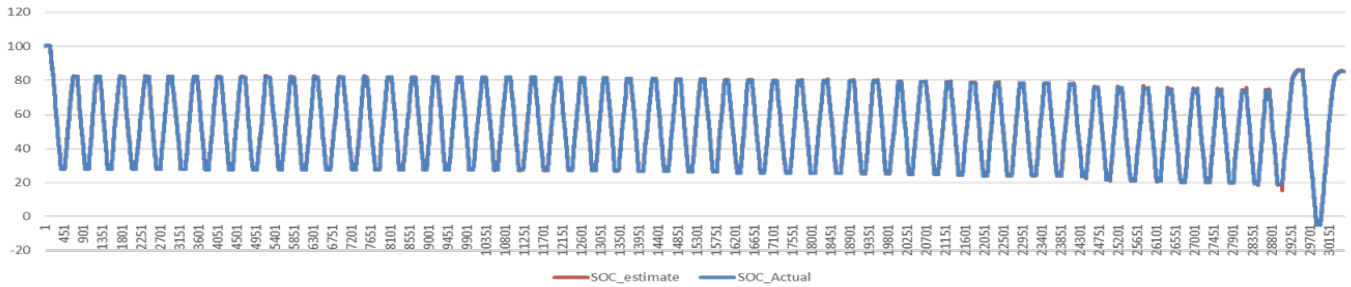
Image Pre-processing – Contrast and Sharpness Enhancement

- Enhance Image Analytics Potential with effective Image Enhancement
- Algorithms execute on GPU for lightning-fast results
- Very Low Execution Overhead with optimized algorithms



Object Tracking Techniques

- Single and Multiple Object Tracking using specialized Algorithms like EKF, KCF, CSRT
- Executes seamlessly on CUDA Cores for real-time use
- Automatic Tracking Error Detection and Reinitialization
- Used in Target Tracking Applications



Battery Management System – State of Charge Estimation

- Neural Network and Logical Regression based Models for prediction of State of Charge
- Models were trained on several battery types and performance was evaluated

Li-Ion-Graphite 1500 mAh

- Mean Absolute Error is 0.11
- MSE is 0.08
- Mean Percentage error is 0.6%
- Accuracy is 99.4%

1500 mAh

Li-Ion Panasonic 18650 2900 mAh

- Mean Absolute Error is 0.004
- MSE is 0.01
- Mean Percentage error is 0.32%
- Accuracy is 99.68%

2900 mAh

Our Advantages

AI/ML

Highly Qualified Team with Master's/Doctoral Degrees

Vastly experienced in architecting and deploying solutions that outperformed Customer Expectations

Flair for Research and achieving state of the art

ALTEN Global Technologies

Engineering Services Rendered with a Product Development Mindset

One Stop Shop for all needs – Hardware and Software

Over 30 years of Excellence in Engineering Solutions



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