Classification at the Edge

Introducing AI on Vision4ce tracking products, delivering true AI classification at the edge!

Vision4ce's Deep Neural Network based classification application runs on a CHARM 100 powered by NVIDIA's Tegra architecture. It can be used for all manned and unmanned systems that require real-time video and image processing, tracking and multi-target object classification detection technology.

The CHARM 100 can harnesses the power of deep neural networks to allow users to track by object classification or to obtain classification information about the tracked objects, giving the operator a powerful option for automating tracker control.

With our dedicated in-house deep learning team, Vision4ce can assist with the entire deep learning process: Data collection, analysis, architecture selection, customisation, training and debugging, optimisation and runtime accelerators.

Features include:
- Processing Channels: 2
- Video Inputs: 4xPAL/NTSC, 2xYPrPb, 4x3G-SDI
- Video Outputs: 4xPAL/NTSC, 2xYPrPb, 4x3G-SDI
- Data Interfaces: 4xRS422, 1xEthernet

Benefits:
- Real time
- Multi class classification, 80+ classes (including drone and maritime objects)
- Object Localisation
- Light weight variant available
- High accuracy with respect to other R-CNN based
- algorithm

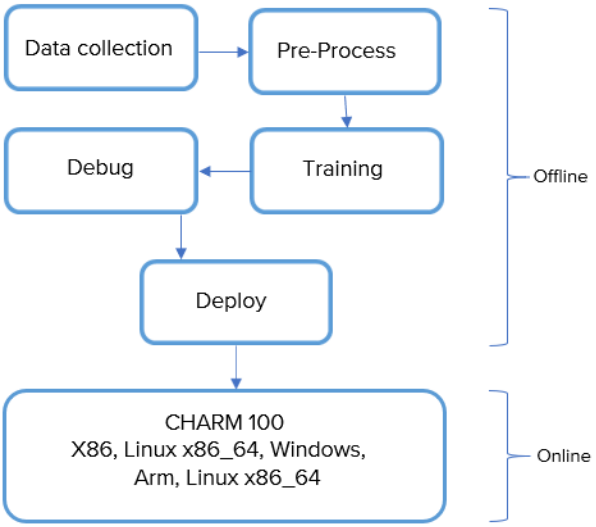
Applications for use:
- Unmanned vehicles
- Autonomous driving
- Image correction

Vision4ce have also developed a range of GPU based embedded platforms which are efficient for AI computing at the edge. In addition several software solutions such as our Video management software provide an architecture with rules based learning already that allows the trained AI process to be added into the existing frameworks.

The CHARM 100 has the following capabilities:

- Low Latency
- Dual Processing Channels
- Object Classification
- Image Enhancement
- Object Tracking
- Sensor Fusion
- Video Compression and Recording – H.264, M-JPEG
- Electronic Image Stabilization
- Video Streaming – RTSP
- Servo Platform Control
- Camera Control
- Panoramic Image Formation

Work Flow:



Manufactured and designed in the UK

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