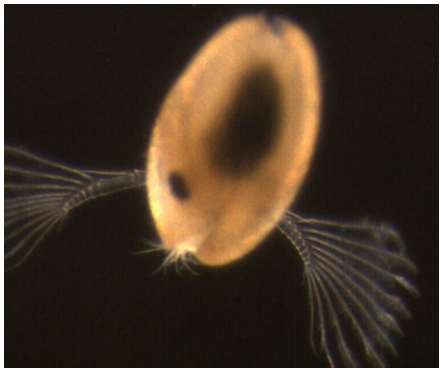
DICE

Deep-Learning Image Classification Environment



Overview:

The Deep-Learning Image Classification Environment (DICE) provides a seamless method for syncing data from any COV optical instrument. Once synced, DICE's built-in Classify Manager software provides tools for building, training, and validating models used for automatic classification.

Dataset Management:

The Manage Sets option allows users to view, select, move, copy, and delete ROIs within a selected training set. It also allows users to add images to other training sets. Administrative options allow users to clone training sets, create multiple users, create/rename/delete classes, set reference images, and auto load images from a new dataset.

Manually Classify:

This option allows users to view images/ROI's by time and classify them to a particular class. There are options to hide already classified images, create new classes and set reference images for each class.

Build/Train CDNN Models:

Users can setup and build convolutional deep neural networks with real-time object detection (CDNN models). Options include build/show a configuration/model, train the model, validate the model, and then show the initial training/test images, training results, and validation results.

Auto Classify:

Select a model that has been built, configured, trained, and validated. Images can be selected either by event, time, or image list. The auto classification process can be started and monitored in real-time.

View Results:

Select specific runs from training set configurations and show the training results, validation results, wild results, along with the ability to display the training, test, validation, and wild images. There is also a single image viewer for interactively displaying the images.

More information:

https://coastaloceanvision.com

Specifications:

Computation	
Computer	Embedded NVIDIA® Jetson™ TX2
GPU	1 TFLOP/s 256-core with NVIDIA® Pascal™ or Maxwell™ Architecture
CPU	64-bit ARM® A57 CPUs or HMP Dual Denver 2/2MB L2 + Quad ARM® A57/2MB L2 (Up to 2 GHz)
Data Storage	
Memory	8GB RAM 58.3 GB/s
Storage	32 GB eMMC with 2TB external drive
Data communication	
Networking	2x Gigabit Ethernet (10/100/1000) RJ-45s
Wifi	IEEE 802.11ac
Power	
Voltage	120 VAC (12V DC Input Only)
Dimensions	
(WxHxD)	135mm x 50mm x 105mm (5.31" x 1.97" x 4.13")
Weight	0.703kg / 1.55lb
Ports	
USB	2x USB 3.0 Ports 2x USB 2.0 Ports 1x USB OTG
Display Output	1x HDMI 1.4a (Supports up to HDMI 2.0 UHD 4K [2160p] at 60Hz)

Product specifications subject to change without notice.

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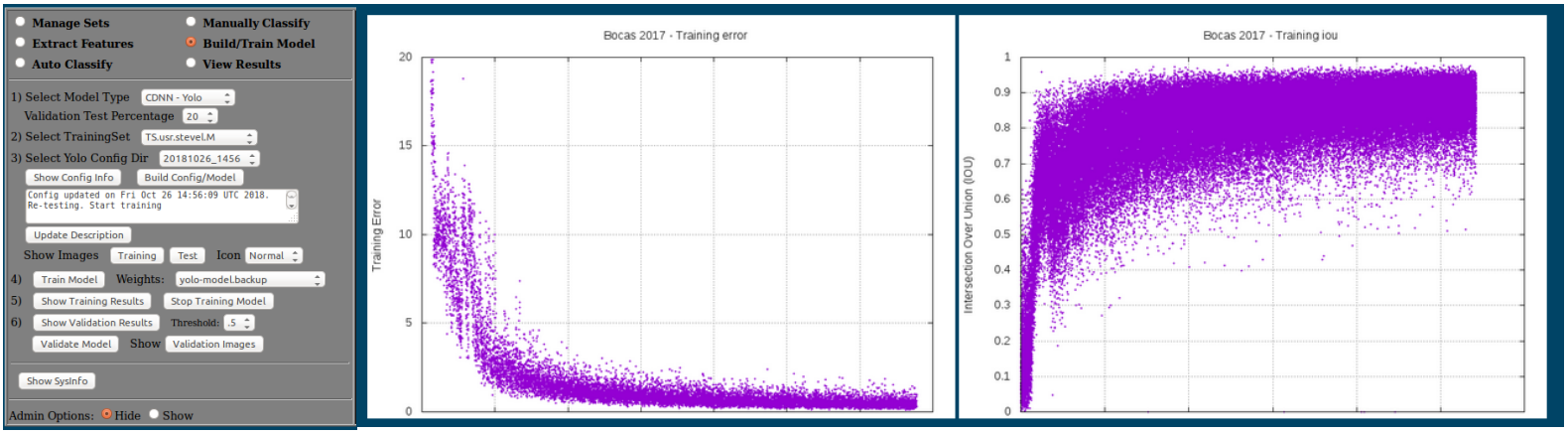
Create and manage datasets

DICE

Build and train convolutional deep neural networks



Run and monitor auto classification in real-time