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1
2 Permit me to introduce myself...
3 Well, I'm glad we got that out of the way.
4
5 usage: simrdwn.py [-h] [--framework FRAMEWORK] [--mode MODE] [--gpu GPU]
6 [--single_gpu_machine SINGLE_GPU_MACHINE] [--nbands NBANDS]
7 [--outname OUTNAME] [--label_map_path LABEL_MAP_PATH]
8 [--weight_dir WEIGHT_DIR] [--weight_file WEIGHT_FILE]
9 [--yolt_train_images_list_file YOLT_TRAIN_IMAGES_LIST_FILE]
10 [--max_batches MAX_BATCHES] [--batch_size BATCH_SIZE]
11 [--yolt_input_width YOLT_INPUT_WIDTH]
12 [--yolt_input_height YOLT_INPUT_HEIGHT]
13 [--tf_cfg_train_file TF_CFG_TRAIN_FILE]
14 [--train_tf_record TRAIN_TF_RECORD]
15 [--train_val_tf_record TRAIN_VAL_TF_RECORD]
16 [--yolt_object_labels_str YOLT_OBJECT_LABELS_STR]
17 [--train_model_path TRAIN_MODEL_PATH]
18 [--use_tfrecords USE_TFRECORDS]
19 [--valid_presliced_tfrecord_part VALID_PRESLICED_TFRECORD_PART]
20 [--valid_presliced_list VALID_PRESLICED_LIST]
21 [--valid_testims_dir VALID_TESTIMS_DIR]
22 [--slice_sizes_str SLICE_SIZES_STR]
23 [--edge_buffer_valid EDGE_BUFFER_VALID]
24 [--max_edge_aspect_ratio MAX_EDGE_ASPECT_RATIO]
25 [--slice_overlap SLICE_OVERLAP]
26 [--nms_overlap_thresh NMS_OVERLAP_THRESH]
27 [--valid_box_rescale_frac VALID_BOX_RESCALE_FRAC]
28 [--valid_slice_sep VALID_SLICE_SEP]
29 [--val_df_root_init VAL_DF_ROOT_INIT]
30 [--val_df_root_aug VAL_DF_ROOT_AUG]
31 [--valid_splitims_locs_file_root VALID_SPLITIMS_LOCS_FILE_ROOT]
32 [--valid_prep_only VALID_PREP_ONLY] [--BGR2RGB BGR2RGB]
33 [--overwrite_inference_graph OVERWRITE_INFERENCE_GRAPH]
34 [--min_retain_prob MIN_RETAIN_PROB]
35 [--yolt_nms_thresh YOLT_NMS_THRESH]
36 [--plot_thresh_str PLOT_THRESH_STR]
37 [--show_labels SHOW_LABELS] [--alpha_scaling ALPHA_SCALING]
38 [--show_valid_plots SHOW_VALID_PLOTS]
39 [--rotate_boxes ROTATE_BOXES]
40 [--plot_line_thickness PLOT_LINE_THICKNESS]
41 [--n_valid_output_plots N_VALID_OUTPUT_PLOTS]
42 [--valid_make_legend_and_title VALID_MAKE_LEGEND_AND_TITLE]
43 [--valid_im_compression_level VALID_IM_COMPRESSION_LEVEL]
44 [--keep_valid_slices KEEP_VALID_SLICES]
45 [--yolt_cfg_file YOLT_CFG_FILE]
46 [--subdivisions SUBDIVISIONS] [--use_opencv USE_OPENCV]
47 [--boxes_per_grid BOXES_PER_GRID]
48 [--yolt_test_im YOLT_TEST_IM]
49 [--yolt_test_thresh YOLT_TEST_THRESH]
50 [--yolt_test_labels YOLT_TEST_LABELS]
51 [--train_model_path2 TRAIN_MODEL_PATH2]
52 [--label_map_path2 LABEL_MAP_PATH2]
53 [--weight_dir2 WEIGHT_DIR2] [--weight_file2 WEIGHT_FILE2]
54 [--slice_sizes_str2 SLICE_SIZES_STR2]
55 [--plot_thresh_str2 PLOT_THRESH_STR2]
56 [--inference_graph_path2 INFERENCE_GRAPH_PATH2]
57 [--yolt_cfg_file2 YOLT_CFG_FILE2]
58 [--val_df_root_init2 VAL_DF_ROOT_INIT2]
59 [--val_df_root_aug2 VAL_DF_ROOT_AUG2]
60 [--valid_splitims_locs_file_root2 VALID_SPLITIMS_LOCS_FILE_ROOT2]
61 [--val_df_root_tot VAL_DF_ROOT_TOT]
62 [--val_prediction_df_refine_tot_root_part
63 VAL_PREDICTION_DF_REFINE_TOT_ROOT_PART]
64 [--simrdwn_dir SIMRDWN_DIR]
65 [--multi_band_delim MULTI_BAND_DELIM]
66 [--zero_frac_thresh ZERO_FRAC_THRESH]

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66 [--str_delim STR_DELIM]
67
68 optional arguments:
69 -h, --help show this help message and exit
70 --framework FRAMEWORK
71 object detection framework [yolt, ssd, faster_rcnn]
72 --mode MODE [compile, test, train, valid]
73 --gpu GPU GPU number, set < 0 to turn off GPU support
74 --single_gpu_machine SINGLE_GPU_MACHINE
75 Switch to use a machine with just one gpu
76 --nbands NBANDS Number of input bands (e.g.: for RGB use 3)
77 --outname OUTNAME unique name of output
78 --label_map_path LABEL_MAP_PATH
79 Object classes, /raid/local/src/simrdwn/data/class_lab
80 els_airplane_boat_car.pbtxt
81 --weight_dir WEIGHT_DIR
82 Directory holding trained weights
83 --weight_file WEIGHT_FILE
84 Input weight file
85 --yolt_train_images_list_file YOLT_TRAIN_IMAGES_LIST_FILE
86 file holding training image names, should be in
87 simrdwn_dir/data/
88 --max_batches MAX_BATCHES
89 Max number of training batches
90 --batch_size BATCH_SIZE
91 Number of images per batch
92 --yolt_input_width YOLT_INPUT_WIDTH
93 Size of image to input to YOLT [n-boxes * 32: 415,
94 544, 608, 896]
95 --yolt_input_height YOLT_INPUT_HEIGHT
96 Size of image to input to YOLT
97 --tf_cfg_train_file TF_CFG_TRAIN_FILE
98 Configuration file for training
99 --train_tf_record TRAIN_TF_RECORD
100 tfrecord for training
101 --train_val_tf_record TRAIN_VAL_TF_RECORD
102 tfrecord for validation during training
103 --yolt_object_labels_str YOLT_OBJECT_LABELS_STR
104 yolt labels str: car,boat,giraffe
105 --train_model_path TRAIN_MODEL_PATH
106 Location of trained model
107 --use_tfrecords USE_TFRECORDS
108 Switch to use tfrecords for infernece
109 --valid_presliced_tfrecord_part VALID_PRESLICED_TFRECORD_PART
110 Location of presliced training data tfrecord if empty
111 us valid_presliced list
112 --valid_presliced_list VALID_PRESLICED_LIST
113 Location of presliced training data list if empty, use
114 tfrecord
115 --valid_testims_dir VALID_TESTIMS_DIR
116 Location of validation images
117 --slice_sizes_str SLICE_SIZES_STR
118 Proposed pixel slice sizes for valid, will be split
119 into array by commas (e.g.: '0.2,0.3' => [0.2,0.3])
120 --edge_buffer_valid EDGE_BUFFER_VALID
121 Buffer around slices to ignore boxes (helps with
122 truncated boxes and stitching) set <0 to turn off if
123 not slicing test ims
124 --max_edge_aspect_ratio MAX_EDGE_ASPECT_RATIO
125 Max aspect ratio of any item within the above buffer
126 --slice_overlap SLICE_OVERLAP
127 Overlap fraction for sliding window in valid
128 --nms_overlap_thresh NMS_OVERLAP_THRESH
129 Overlap threshold for non-max-suppression in python
130 (set to <0 to turn off)
131 --valid_box_rescale_frac VALID_BOX_RESCALE_FRAC

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132 Defaults to 1, rescale output boxes if training boxes
133 are the wrong size
134 --valid_slice_sep VALID_SLICE_SEP
135 Character(s) to split validation image file names
136 --val_df_root_init VAL_DF_ROOT_INIT
137 Results in dataframe format
138 --val_df_root_aug VAL_DF_ROOT_AUG
139 Results in dataframe format
140 --valid_splitims_locs_file_root VALID_SPLITIMS_LOCS_FILE_ROOT
141 Root of valid_splitims_locs_file
142 --valid_prep_only VALID_PREP_ONLY
143 Switch to only prep files, not run anything
144 --BGR2RGB BGR2RGB
145 Switch to flip training files to RGB from cv2 BGR
146 --overwrite_inference_graph OVERWRITE_INFERENCE_GRAPH
147 Switch to always overwrite inference graph
148 --min_retain_prob MIN_RETAIN_PROB
149 minimum probability to retain for validation
150 --yolt_nms_thresh YOLT_NMS_THRESH
151 Defaults to 0.5 in yolt.c, set to 0 to turn off nms in
152 C
153 --plot_thresh_str PLOT_THRESH_STR
154 Proposed thresholds to try for valid, will be split
155 into array by commas (e.g.: '0.2,0.3' => [0.2,0.3])
156 --show_labels SHOW_LABELS
157 Switch to use show object labels
158 --alpha_scaling ALPHA_SCALING
159 Switch to scale box alpha with probability
160 --show_valid_plots SHOW_VALID_PLOTS
161 Switch to show plots in real time in validation
162 --rotate_boxes ROTATE_BOXES
163 Attempt to rotate output boxes using hough lines
164 --plot_line_thickness PLOT_LINE_THICKNESS
165 Thickness for valid output bounding box lines
166 --n_valid_output_plots N_VALID_OUTPUT_PLOTS
167 Switch to save validation pngs
168 --valid_make_legend_and_title VALID_MAKE_LEGEND_AND_TITLE
169 Switch to make legend and title
170 --valid_im_compression_level VALID_IM_COMPRESSION_LEVEL
171 Compression level for output images. 1-9 (9 max
172 compression)
173 --keep_valid_slices KEEP_VALID_SLICES
174 Switch to retain sliced valid files
175 --yolt_cfg_file YOLT_CFG_FILE
176 Configuration file for network, in cfg directory
177 --subdivisions SUBDIVISIONS
178 Subdivisions per batch
179 --use_opencv USE_OPENCV
180 1 == use_opencv
181 --boxes_per_grid BOXES_PER_GRID
182 Bounding boxes per grid cell
183 --yolt_test_im YOLT_TEST_IM
184 test image, in data_dir
185 --yolt_test_thresh YOLT_TEST_THRESH
186 prob thresh for plotting outputs
187 --yolt_test_labels YOLT_TEST_LABELS
188 test labels, in data_dir
189 --train_model_path2 TRAIN_MODEL_PATH2
190 Location of trained model
191 --label_map_path2 LABEL_MAP_PATH2
192 Object classes
193 --weight_dir2 WEIGHT_DIR2
194 Directory holding trained weights
195 --weight_file2 WEIGHT_FILE2
196 Input weight file for second inference scale
197 --slice_sizes_str2 SLICE_SIZES_STR2
198 Proposed pixel slice sizes for valid2 == secondweight

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198 file. Will be split into array by commas (e.g.:
199 '0.2,0.3' => [0.2,0.3])
200 --plot_thresh_str2 PLOT_THRESH_STR2
201 Proposed thresholds to try for valid2, will be split
202 into array by commas (e.g.: '0.2,0.3' => [0.2,0.3])
203 --inference_graph_path2 INFERENCE_GRAPH_PATH2
204 Location of inference graph for tensorflow object
205 detection API
206 --yolt_cfg_file2 YOLT_CFG_FILE2
207 YOLT configuration file for network, in cfg directory
208 --val_df_root_init2 VAL_DF_ROOT_INIT2
209 Results in dataframe format
210 --val_df_root_aug2 VAL_DF_ROOT_AUG2
211 Results in dataframe format
212 --valid_splitims_locs_file_root2 VALID_SPLITIMS_LOCS_FILE_ROOT2
213 Root of valid_splitims_locs_file
214 --val_df_root_tot VAL_DF_ROOT_TOT
215 Results in dataframe format
216 --val_prediction_df_refine_tot_root_part VAL_PREDICTION_DF_REFINE_TOT_ROOT_PART
217 Refined results in dataframe format
218 --simrdwn_dir SIMRDWN_DIR
219 path to package /cosmiq/yolt2/
220 --multi_band_delim MULTI_BAND_DELIM
221 Delimiter for multiband data
222 --zero_frac_thresh ZERO_FRAC_THRESH
223 If less than this value of an image chip is blank,
224 skip it
225 --str_delim STR_DELIM
226 Delimiter for string lists
227

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