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PROCESSING **CLASSIFIER** [PARAMETERS](EE26%20%20%20%20%20%20%20%20%20Parameters.docx)

A classifier is an Earth Engine parameter object that represents a set of rules by which pixels are grouped, according to their values

on the bands of satellite images, such that each group includes pixels that are likely to represent a particular geographical condition. Classifiers can be processed by using operations of the types listed below.

**CREATING** CLASSIFIERS [ee.Classifier.mahalanobis](#mahalanobis)

[ee.Classifier.naiveBayes](#naiveBayes) [ee.Classifier.continuousNaiveBayes](#continuousNaiveBayes)

[ee.Classifier.perceptron](#perceptron) [ee.Classifier.ikpamir](#ikpamir)

[ee.Classifier.winnow](#winnow) [ee.Classifier.gmoMaxEnt](#gmoMaxEnt) [ee.Classifier.randomForest](#randomForest)

[ee.Classifier.pegasosGaussian](#pegasosGaussian) [ee.Classifier.pegasosLinear](#pegasosLinear) [ee.Classifier.pegasosPolynomial](#pegasosPolynomial)

[ee.Classifier.svm](#svm) [ee.Classifier.cart](#cart)

**TRAINING** CLASSIFIERS [classifier.train](#train) [image.trainClassifier](#image_trainClassifier) [featureCollection.trainClassifier](#featureCollectiontrainClassifier)

**EDITING** CLASSIFIERS [classifier.setOutputMode](#setOutputMode)

**DESCRIBING** CLASSIFIERS [classifier.mode](#mode) [classifier.schema](#schema) [classifier.explain](#explain)

[classifier.confusionMatrix](#confusionMatrix)

**DOCUMENTING** CLASSIFIERS [classifier.getInfo](#getInfo_Describe) [ee.Algorithms.Describe(classifier)](#getInfo_Describe)

[classifier.toString](#toString_serialize) [classifier.serialize](#toString_serialize)

**PRESENTING** CLASSIFIERS

IN **PRINT** [print(classifier)](#print_console) [console.log(classifier)](#print_console)

[alert(classifier)](#alert_confirm) [confirm(classifier)](#alert_confirm)

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ee.Classifier.mahalanobis creates a new and empty Mahalanobis Distance classifier.

newClassifier = ee.Classifier.mahalanobis()

The new classifier

var TheCLASSIFIER = ee.Classifier.mahalanobis( );

print( TheCLASSIFIER );

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ee.Classifier.naiveBayes creates a new and empty Fast Naïve Bayes classifier.

newClassifier = ee.Classifier.naiveBayes( *lambda* )

A floating-point “lambda” value used to generate ( as lambda / lambda \* number of training features ) an alternative to zero

in representing the probability of encountering classes that are not present in the training set . Default: 0.000001

The new classifier

var

ADD EXAMPLE

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ee.Classifier.continuousNaiveBayes creates a new and empty Continuous Naïve Bayes classifier.

newClassifier = ee.Classifier.continuoudNaiveBayes( *lambda* )

A floating-point “lambda” value used to generate ( as lambda / lambda \* number of training features ) an alternative to zero

in representing the probability of encountering classes that are not present in the training set . Default: 0.001

The new classifier

var

ADD EXAMPLE

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ee.Classifier.perceptron creates a new and empty “Perceptron” classifier as described by Daume.

newClassifier = ee.Classifier.perceptron( *numberOfEpochs. averaged?* )

A Boolean set to true (only) if an averaged

perceptron is to be used. Default: true

A specified maximum number of training epochs, given as an integer. Default: 5

The new

classifier

var

ADD EXAMPLE

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ee.Classifier.ikpamir creates a new and empty “Intersection Kernel Passive-Aggressive Method for Information Retrieval” (IKPAMIR) classifier

as described by Maji, et al.

newClassifier = ee.Classifier.ikpamir( *numberOfBins, learningRate, numberOfEpochs* )

A specified maximum number of training

epochs, given as an integer. Default: 5

A specified rate of learning from each

example, given as a float. Default: 0.1

A specified number of histogram bins per

dimension, given as an integer. Default: 10

The new

classifier

var

ADD EXAMPLE

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ee.Classifier.winnow creates a new and empty “Winnow” classifier as described by Koppel et al. 2002.

newClassifier = ee.Classifier.winnow( *numberOfEpochs, learningRate, learningBiasRate, margin* )

A specified maximum number of training epochs, given as an integer. Default: 5

A specified rate of learning

for updating bias weights,

given as a float. Default: 0.2

A specified margin

size, given as a float.

Default: 0.2

A specified rate of learning

from each example, given

as a float. Default: 0.1

The new

classifier

var

ADD EXAMPLE

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ee.Classifier.gmoMaxEnt creates a new and empty “GMO Maximum Entropy” classifier as described by Mann *et al*.

newClassifier = ee.Classifier.gmoMaxEnt( *weight1, weight2, epsilon, minIterations, maxIterations* )

An optimization

stopping factor,

given as a float.

Default: 0.00001

A minimum limit on optimizer iterations

given as an integer.

Default: 0

A maximum limit on optimizer iterations

given as an integer.

Default: 100

The new

classifier

A weight for L1 regularization, given as a float. Default: 0

A weight for L2 regularization, given as a float. Default: 0.00001

var

ADD EXAMPLE

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ee.Classifier.randomForest creates a new and empty “Rifle Serial” classifier, which uses a “Random Forest” algorithm.

newClassifier = ee.Classifier.randomForest( *numberOfTrees, valuesPerSplit, minLeafPopulation …*

A specified number of Rifle decision trees to

create per class, given as an integer. Default: 1

A specified number of variables

per split, given as an integer.

Default: the square root of the

number of variables

A specified maximum

number of leaves in the

terminal node, given as

an integer. Default: 1

The new

classifier

*… bagFraction, pitOfBagMode* )

A Boolean set to true (only) if the classifier

is to be run in out-of-bag mode. Default: false

A specified fraction of the input to bag

per tree, given as a float. Default: 0.5

var

ADD EXAMPLE

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ee.Classifier.pegasosGaussian creates a new and empty Gaussian “Primal Estimated sub-GrAdient SOlver for SVM” (PEGASOS) classifier

as described by Shalev-Schwartz, et al.

newClassifier = ee.Classifier.pegasosGaussian( *rbfGamma, lossFunction, lambdaFactor, iterations, …*

A specified Gamma value for the Gaussian kernel, given as an integer. Default: 1

A specified SVM

regularization factor,

given as an integer.

Default: 1

A specified number of training

iterations, given as an integer.

Default: 5 times the

size of the training data set

A specified loss function, given as one of the strings “HingeSum,”

“HingeMax,” “LogSum,” or “LogMax.” Default: 10

The new classifier

*… subSetSize, regularizationNorm, multiGamma* )

A specified Gamma value for the loss

function,given as a float. Default: 1.0

A specified number of random samples to process

on each iteration, given as an integer. Default: 1

A specified regularization norm,

given as a float. Default: 1.0

var

ADD EXAMPLE

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ee.Classifier.pegasosLinear creates a new and empty linear “Primal Estimated sub-GrAdient SOlver for SVM” (PEGASOS) classifier

as described by Shalev-Schwartz, et al.

newClassifier = ee.Classifier.pegasosLinear( *exponentiatedUpdate?, lossFunction, lambdaFactor, …*

The new classifier

A specified SVM regularization

factor, given as an integer.

Default: 1

A specified loss function, given as one of the

strings “HingeSum,” “HingeMax,”“LogSum,”

or “LogMax.” Default: 10

A specified Booean set to true (only)

ifan exponentiated update is to be

used. Default: false

*… iterations, subSetSize, regularizationNorm, multiGamma* )

A specified number of training

iterations, given as an integer.

Default: 5 times the

size of the training data set

A specified regularization norm,

given as a float. Default: 1.0

A specified Gamma value for the loss

function,given as a float. Default: 1.0

A specified number

of random samples

to process on each

iteration, given as an

integer. Default: 1

var

ADD EXAMPLE

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ee.Classifier.pegasosPolynomial creates a new and empty polynomial “Primal Estimated sub-GrAdient SOlver for SVM” (PEGASOS) classifier

as described by Shalev-Schwartz, et al.

newClassifier = ee.Classifier.pegasosPolynomial( *polyDegree, polyBias, lossFunction, …*

A specified polynominal kernel degree, given as an integer. Default: 3

The new classifier

A specified loss function, given as one of the

strings “HingeSum,” “HingeMax,”“LogSum,”

or “LogMax.” Default: 10

A specified polynominal kernel bias, given as an integer. Default: 1

*… lambdaFactor, iterations, subSetSize, regularizationNorm, multiGamma* )

A specified number of

training iterations, given

as an integer. Default:

5 times thesize of the

training data set

A specified number

of random samples

to process on each

iteration, given as an

integer. Default: 1

A specified

regularization

norm, given

as a float.

Default: 1.0

A specified Gamma

value for the loss

function,given as

a float. Default: 1.0

A specified SVM regularization

factor, given as an integer.

Default: 1

var

ADD EXAMPLE

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ee.Classifier.svm creates a new and empty “Support Vector Machine” (SVM) classifier.

newClassifier = ee.Classifier.svm( *procedure, svmType, kernelType, shrinkingHeuristics?, degree, …*

A specified polynominal

degree for POLY kernels, given as an integer.

Default: 3

A Boolean set to true

(only) if shrinking

heuristics are to be

used. Default: true

A specified kernel

type, given as one

of the strings “LINEAR,”

“POLY,” “RBF,” or

“SIGMOID.”

Default: “LINEAR”

A specified decision procedure, given as one of

the strings “Voting” ot “Margin”Default: “Voting”

The new

classifier

A specified SVM type, given as one of the strings “C\_SVC,” “NU\_SVC,”

“ONE\_CLASS,” “EPSILON\_SVR,” ot “NU\_SVR.” Defaukt: “NU\_SVC”

*… gammaValue, coefValue, costValue, nuValue, terminationEpsilon, LossEpsilon* )

A specified

loss function

Epsilon factor

for the

EPSILON\_SVR

classification type,

given as a float.

Default: 0.01

A specified

termination

criterion

tolerance for the

EPSILON\_SVR

classification type,

given as a float.

Default: 0.001

A specified nu parameter for NU-SVC,

ONE\_CLASS, and NU-SVR classifier

types, given as a float. Default: 0.5

A specified Gamma value in the kernel function

for POLY, RBF, and SIGMOID kernels, given as

a float. Default: null

A specified coef 0 value in the kernel function

for POLY and SIGMOID kernels, given as a float.

Default: null

A specified cost parameter for C-SVC,

EPSILON-SVR, and NU-SVR classifier

types, given as a float. Default: 1.0

var OriginalIMAGE = ee.Image('LC8\_L1T\_TOA/LC80400372013318LGN00').select( ['B2','B3','B4','B5','B6','B7','B10','B11'] );

var BandSelectedIMAGE = OriginalIMAGE.select(['B2','B3','B4','B5','B6','B7','B10','B11']);

var OriginalFEATURES = ee.FeatureCollection('ft:1vYn7-uO80vAVpZxi81yXzx55jgtztsZaLxG5TWYH');

var BandCodedFEATURES = BandSelectedIMAGE.sampleRegions( OriginalFEATURES,['class'], 30 );

var UntrainedCLASSIFIER = ee.Classifier.svm( 'Voting','C\_SVC','RBF',true,null,0.5,null,10 );

var TrainedCLASSIFIER = UntrainedCLASSIFIER.train( BandCodedFEATURES, 'class', ['B2','B3','B4','B5','B6','B7','B10','B11'] );

var ClassifiedIMAGE = BandSelectedIMAGE.classify( TrainedCLASSIFIER );

Map.setCenter(-117.3, 33.30, 9);

Map.addLayer(BandSelectedIMAGE, {bands: ['B4', 'B3', 'B2'], max: 0.5, gamma: 2});

Map.addLayer(ClassifiedIMAGE, {min: 0, max:10, palette:['006400','32CD32','EEE8AA','8B4513','98FB98','00FA9A',

'90EE90','00008B','FF8C00','ADFF2F','808080']}, 'Vegetation Type');

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ee.Classifier.cart creates a new and empty “Classification and Regression Tree” (CART) classifier as described by Brieman *et al*., 1984.

newClassifier = ee.Classifier.cart( *crossValidation, maxLevels, minPointsPerNode, minPointsPerSpllit …*

A minimum limit on the number

of training points per splittable

node in theclassification tree,

given as an integer. Default: 1

A minimum limit on the number

of training points per node in the

classificationtree, given as an

integer. Default: 1

A maximum limit on the

number of levels in the

classification tree, given

as an integer. Default: 10

A cross-validation factor for

pruning the classification tree,

given as an integer. Default: 10

The new

classifier

*… minCostPerNode, prune?, pruneTolerance, resolution, quantizationMargin, randomSeed* )

The standard error to be assumed in

defining the simplest classification tree

whose accuracy is comparable to a tree

of minimum cost, given as a float.

Default: 0.5

The fraction of the training data

range reserved to avoid overload

duringquantization, given as a

float. Default: 0.1

A minimum limit on the training

set cost per splittable node in the

classification tree, given as a float. Default: 1 e-10

A seed value for random, number generation, given

as an integer. Default: 0

A Boolean set to true (only) if termination criteria are to be

imposed while growing the regression tree but not while

pruning it. Default: false.

The resolution at which numerical values are to be quantized, given

as an integer Default: 10

var

ADD EXAMPLE

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classifier.train creates a new classifier by replicating a specified classifier and training it with a specified property of a specified feature collection.

newClassifier = oldClassifier.train( features, property*, inputProperties, subSampling, subSamplingSeed* )

A randomization

seec, given as an

integer. Default: 0

A subSampling factor,

given as a float of from 0

through 1. Default: 1.0

The name of the specified property, which must be numerical and

recorded for every feature

The specified feature collection, whose geometry is ignored

The specified

classifier

The new

classifier

A list of the names of properties to be used as training data, each of which must be numerical and recorded

for every feature. Unnecessary if a “band\_order” property is present (as can be created **by image.sample**).

var OriginalIMAGE = ee.Image( 'LANDSAT/LC8\_L1T\_TOA/LC82320672013207LGN00' );

var BandSelectedIMAGE = OriginalIMAGE.select( ['B2','B3','B4','B5','B6','B7','B10','B11'] );

var OriginalFEATURES = ee.FeatureCollection( 'ft:10X7SUjDTiFJDyIA58zLcptK8pwBwjj1BV12SQOgJ' );

var ClassCodedFEATURES = OriginalFEATURES.remap( [1, 2], [0, 1], 'class' );

var BandCodedFEATURES = BandSelectedIMAGE.sampleRegions( ClassCodedFEATURES, ['class'], 30 );

var UntrainedCLASSIFIER = ee.Classifier.cart();

var TrainedCLASSIFIER = UntrainedCLASSIFIER.train(BandCodedFEATURES, 'class', ['B2','B3','B4','B5','B6','B7','B10','B11']);

print( 'Features by Class', ClassCodedFEATURES );

print( 'Features with Band Properties', BandCodedFEATURES );

print( 'Untrained Classifier', UntrainedCLASSIFIER );

print( 'Trained Classifier', TrainedCLASSIFIER );

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featureCollection.trainClassifier creates a new image by training a specified classifier with specified parameters

by using specified properties of the features in a specified feature collection.

newImage = oldFeatureCollection.trainClassifier( propertyList, *classNumberProperty, classifierName, …*

The specified properties, given as

a list of name strings. Default: null.

The specified

feature collection

The specified property indicating class numbers

given as a name string. Default: ‘classification’

The new image

The specified classifier, given as one of the following strings: ‘FastNaiveBayes,’ ‘GmoMaxEnt,’ ‘Winnow,’ ‘MultiClassPerceptron,’

‘Pegasos,’ ‘Cart,’ ‘RifleSerialClassifier,’ ‘IKPamir,’ ‘VotingSvm,’ ‘MarginSvm.’ Ignored if **classifier** is specified. Default: ‘FastNaiveBayes’

*… parameters, mode, numberOfSubsamples, bootstrap, aggregator, predefinedClassifier* )

The specified number of subsamples,

given as an integer. Default: null

The specified classifier

parameters, given as a string.

The name of a predefined classifier, given as a string.

If thisis specified, all other classifier specifications are ignored.

The specified aggregator, given

as a string. Default: null

The specified classifier mode, given as one of the following strings: 'classification,' 'regression,' or 'probability'. Default: ‘classification’

The specified bootstrap subsampling

factor, given as a float. Default: null

var

ADD EXAMPLE

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image.trainClassifier creates a new image by training a specified classifier with specified parameters

by using specified bands of a specified image.

newImage = oldImage.trainClassifier( bandList, *trainingImage, trainingBand, trainingRegion, …*

The **trainingImage** region to be

used, given as a geometry.

Default: the whole extent

of **trainingImage**

The **trainingImage** band to be

used, given as a name string.

The specified bands, given as a

list of name strings. Default: null.

The specified image

The new image

The specified training image, given as a name string. If this is specified, a trainingBand must also be specified.

*… trainingFeatures, trainingProperty, crs, crsTransform, XXX, subsampling, seed* , …

Random sampling seed. Default: 0

Unused

The coordinate reference system

into which the training data are

to be rasterized, given as an EPSG

code ( as described [here](http://spatialreference.org) ) or as a

WKT string ( as described [here](http://en.wikibooks.org/wiki/Geospatial_Data_in_SQL_Server/WKT) ).

If this is specified, crs\_transform

must also be specified. Default:

the coordinate reference

system of the training data

The specified training feature collection,

collection given as a name string.

Random sampling factor. Ignored if specified as aclassifier parameter. Default: 1

The specified property indicating class numbers

given as a name string. Default: ‘classification’

**crs** transformation values, given

as a 3x2 array of Doubles.

… *classifierName*, *parameters, mode, subsamples, bootstrap, aggregator, predefinedClassifier* )

The name of a

predefined classifier,

given as a string.

If thisis specified,

all other classifier specifications

are ignored.

The specified aggregator, given

as a string. Default: null

The specified number of

subsamples, given as an integer.

The specified classifier

parameters, given as a string.

The specified classifier mode, given as one of the following strings: 'classification,' 'regression,' or 'probability'. Default: ‘classification’

The specified bootstrap subsampling

factor, given as a float. Default: null

The specified classifier, given as one of the following strings: ‘FastNaiveBayes,’ ‘GmoMaxEnt,’ ‘Winnow,’ ‘MultiClassPerceptron,’

‘Pegasos,’ ‘Cart,’ ‘RifleSerialClassifier,’ ‘IKPamir,’ ‘VotingSvm,’ ‘MarginSvm.’ Ignored if **classifier** is specified. Default: ‘FastNaiveBayes’

var ADD EXAMPLE

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classifier.setOutputMode creates a new classifier by replicating a specified classifier and setting its output mode.

newClassifier = oldClassifier.setOutputMode( mode)

The specified mode, given as one of the following strings:

- “CLASSIFICATION” to oputput class numbers,

- “REGRESSION” to output standard regression results, or

- “PROBABILITY” to output probabilities of correct classifications

Defaullt: “CLASSIFICATION”

The specified classifier

The new classifier

var

ADD EXAMPLE

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classifier.mode creates a new string identifying the mode of a specified classifier as “CLASSIFICATION,” “REGRESSION,” or “PROBABILITY.”

newString = oldClassifier.mode()

The specified classifier

The new string

var

ADD EXAMPLE

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classifier.schema creates a new list of the inputs used by a specified classifier (or null if the classifier has not yet had any training data added.

newList = oldClassifier.schema()

The specified classifier

The new list

var

ADD EXAMPLE

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classifier.explain creates a new dictionary describing the results of a specified trained classifier.

newDictionary = oldClassifier.explain()

The specified classifier

The new dictionary

var

ADD EXAMPLE

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classifier.confusionMatrix creates, for a specified classifier, a new two-dimensional contingency table or “confusion matrix”

- whose horizontal rows (axis 1) represent input classes,

- whose vertical columns (axis 0) represent output classes, and

- whose values indicate the number cases in which a given input

was classified as a given output.

newConfusionMatrix = oldClassifier.confusionMatrix()

The specified classifier

The new confusion matrix

var AllIMAGES = ee.ImageCollection( 'LANDSAT/LT5\_L1T\_TOA' );

var DateSpecificIMAGES = AllIMAGES.filterDate( '2011-01-01', '2011-12-31' );

var LocationSpecificIMAGES = DateSpecificIMAGES.filterBounds( ee.Geometry.Point(-122.3942, 37.7295) );

var CloudSortedIMAGES = LocationSpecificIMAGES.sort('CLOUD\_COVER' );

var LandsatIMAGE = ee.Image(CloudSortedIMAGES.first() );

var AllBandCloudScoreIMAGE = ee.Algorithms.Landsat.simpleCloudScore( LandsatIMAGE );

var OneBandCloudScoreIMAGE = AllBandCloudScoreIMAGE.select('cloud');

var LandsatBandMaskIMAGE = LandsatIMAGE.mask();

var LandsatAnyMaskIMAGE = LandsatBandMaskIMAGE.reduce( 'min' );

var LandsatCloudMaskIMAGE = LandsatAnyMaskIMAGE.and( OneBandCloudScoreIMAGE.lte(50) );

var CloudfreeLandsatIMAGE = LandsatIMAGE.mask( LandsatCloudMaskIMAGE );

var ModisIMAGE = ee.Image( 'MODIS/051/MCD12Q1/2011\_01\_01' );

var ModisLandcoverIMAGE = ModisIMAGE.select( 'Land\_Cover\_Type\_1' );

var LandsatModisIMAGE = CloudfreeLandsatIMAGE.addBands( ModisLandcoverIMAGE );

var SampledFEATURES = LandsatModisIMAGE.sample( null,null,null,null,5000,0);

var TrainedFEATURES = SampledFEATURES.filter( ee.Filter.neq( 'B1', null ) );

var UntrainedCLASSIFIER = ee.Classifier.randomForest(10);

var TrainedCLASSIFIER = UntrainedCLASSIFIER.train( TrainedFEATURES, 'Land\_Cover\_Type\_1');

var ClassifiedIMAGE = CloudfreeLandsatIMAGE.classify( TrainedCLASSIFIER );

var ClassifierCONMATRIX = TrainedCLASSIFIER.confusionMatrix();

print('Classifier Confusion Matrix: ', ClassifierCONMATRIX);

print('Classifier Confusion Matrix Accuracy: ', ClassifierCONMATRIX.accuracy());

Map.centerObject( ClassifiedIMAGE, 10);

Map.addLayer( CloudfreeLandsatIMAGE, {bands: ['B3', 'B2', 'B1'], max: 0.4}, 'landsat' );

Map.addLayer( ClassifiedIMAGE, {min:0, max:17, palette:['aec3d4','152106','225129','369b47','30eb5b','387242','6a2325',

'c3aa69','b76031','d9903d','91af40','111149','cdb33b','cc0013',

'33280d','d7cdcc','f7e084','6f6f6f'] }, 'classification' );

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ee.Algorithms.Describe and classifier.getInfo

each creates a JSON-compatible text object representing a specified classifier.

newObject = ee.Algorithms.Describe( oldClassifier )

and oldClassifier.getInfo( )

The specified classifier

The new object

var TheCLASSIFIER = ee.Classifier.mahalanobis( );

print( 'From print:', TheCLASSIFIER );

print( 'From ee.Algorithms.Describe( ):', ee.Algorithms.Describe( TheCLASSIFIER ) );

print( 'From getInfo( ):', TheCLASSIFIER.getInfo( ) );

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classifier.toString and .serialize each creates a new string presenting information on a specified classifier.

newString = oldClassifier.toString ( )

and oldClassifier.serialize( )

The specified classifier

The new string

var TheCLASSIFIER = ee.Classifier.mahalanobis( );

print( 'From print:', TheCLASSIFIER );

print( 'From toString( ):', TheCLASSIFIER.toString( ) );

print( 'From serialize( ):', TheCLASSIFIER.serialize( ) );

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**PRESENTING** [CLASSIFIER](#_top) [[[PARAMETERS](EE26%20%20%20%20%20%20%20%20%20Parameters.docx)](EE25%20%20%20%20%20%20%20%20%20Parameters.docx)](EE25%20%20%20%20%20%20%20%20%20Parameters.docx) IN **PRINT**

print ( classifier ) and console.log ( classifier ) present JSON-formatted text renditions of a specified classifier in the console.

print( oldClassifier ) or console.log( oldClassifier )

The specified classifier

var TheCLASSIFIER = ee.Classifier.mahalanobis( );

print( 'From print:', TheCLASSIFIER );

console.log( 'From console.log:', TheCLASSIFIER );

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**PRESENTING** [CLASSIFIER](#_top) [[[PARAMETERS](EE26%20%20%20%20%20%20%20%20%20Parameters.docx)](EE25%20%20%20%20%20%20%20%20%20Parameters.docx)](EE25%20%20%20%20%20%20%20%20%20Parameters.docx) IN **PRINT**

alert ( classifier ) and confirm( classifier ) present JSON-formatted text renditions of a specified classifier in a pop-up message box.

alert( oldClassifier ) or confirm( oldClassifier )

The specified classifier

var TheCLASSIFIER = ee.Classifier.mahalanobis( );

alert( OldDATE );

confirm( OldDATE );