
multiscale::analysis
::Detector
avgClusterednessDegree
avgDensity
image
outputFilepath
debugMode
outputImage
detectMethodCalled
detectorSpecificFieldsInitialised
origin
OUTPUT_CLUSTEREDNESS
OUTPUT_DENSITY
ERR_OUTPUT_WITHOUT
_DETECT
ERR_OUTPUT_FILE
ERR_INVALID_IMAGE
CSV_EXTENSION
IMG_EXTENSION
XML_EXTENSION
WIN_OUTPUT_IMAGE
KEY_ESC
KEY_SAVE
LABEL_COMMENT
LABEL_COMMENT_CONTENTS
LABEL_EXPERIMENT_TIMEPOINT
_SPATIAL_ENTITY
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_CLUSTEREDNESS
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_DENSITY
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_AREA
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_PERIMETER
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_DISTANCE_FROM
_ORIGIN
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_ANGLE_DEGREES
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_SHAPE
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_TRIANGLE_MEASURE
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_RECTANGLE
_MEASURE
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_CIRCLE_MEASURE
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_CENTROID_X
LABEL_SPATIAL_ENTITY
_PSEUDO_3D_CENTROID_Y
+ Detector()
+ ~Detector()
+ detect()
+ outputResults()
# initialise()
# initialiseDetectorSpecific
FieldsIfNotSet()
# setDetectorSpecificFields
InitialisationFlag()
# initialiseDetectorSpecific
Fields()
# initialiseImageDependent
Fields()
# initialiseDetectorSpecific
ImageDependentFields()
# initialiseImageOrigin()
# isValidInputImage()
# detect()
# detectInDebugMode()
# detectInReleaseMode()
# polygonAngle()
# polygonAngle()
# minAreaRectCentre()
# findGoodPointsForAngle()
# findGoodIntersectionPoints()
# displayResultsInWindow()
# outputResultsToFile()
# outputResultsToImage()
# storeOutputImageOnDisk()
# outputResultsToCsvFile()
# outputResultsToCsvFile()
# outputSpatialEntitiesToCsvFile()
# outputAveragedMeasuresTo
CsvFile()
# outputResultsToXMLFile()
# outputResultsToXMLFile()
# addSpatialEntitiesToPropertyTree()
# constructPropertyTree()
# getCollectionOfSpatialEntity
Pseudo3D()
# processImageAndDetect()
# clearPreviousDetectionResults()
# createTrackbars()
# createTrackbarsWindow()
# createDetectorSpecificTrackbars()
# processPressedKeyRequest()
# displayImage()
# printOutputErrorMessage()
multiscale::analysis
::RegionDetector
- alpha
- beta
- blurKernelSize
- morphologicalCloseIterations
- epsilon
- regionAreaThresh
- thresholdValue
- regions
- TRACKBAR_ALPHA
- TRACKBAR_BETA
- TRACKBAR_KERNEL
- TRACKBAR_MORPH
- TRACKBAR_CANNY
- TRACKBAR_EPSILON
- TRACKBAR_REGION_AREA
_THRESH
- TRACKBAR_THRESHOLD
- USE_CANNY_L2
- CONTOUR_AREA_ORIENTED
- ALPHA_REAL_MIN
- ALPHA_REAL_MAX
- BETA_REAL_MIN
- BETA_REAL_MAX
- ALPHA_MAX
- BETA_MAX
- KERNEL_MAX
- MORPH_ITER_MAX
- CANNY_THRESH_MAX
- EPSILON_MAX
- REGION_AREA_THRESH_MAX
- THRESHOLD_MAX
- THRESHOLD_CLUSTEREDNESS
- INTENSITY_MAX
- POLYGON_CLOSED
- DISPLAY_LINE_THICKNESS
+ RegionDetector()
+ ~RegionDetector()
+ getAlpha()
+ getBeta()
+ getBlurKernelSize()
+ getEpsilon()
+ getMorphologicalCloseIterations()
+ getOriginXCoordinate()
+ getOriginYCoordinate()
+ getRegionAreaThresh()
+ getThresholdValue()
+ getRegions()
+ setAlpha()
+ setBeta()
+ setBlurKernelSize()
+ setEpsilon()
+ setMorphologicalCloseIterations()
+ setOriginXCoordinate()
+ setOriginYCoordinate()
+ setRegionAreaThresh()
+ setThresholdValue()
- initialiseDetectorSpecific
Fields()
- initialiseDetectorSpecific
ImageDependentFields()
- createDetectorSpecificTrackbars()
- processImageAndDetect()
- changeContrastAndBrightness()
- smoothImage()
- morphologicalClose()
- thresholdImage()
- findRegions()
- computeAverageMeasures()
- computeAverageClusteredness
Degree()
- computeAverageDensity()
- findContoursInImage()
- createRegionFromPolygon()
- isValidRegion()
- regionClusterednessDegree()
- regionDensity()
- regionArea()
- regionHolesArea()
- clearPreviousDetectionResults()
- getCollectionOfSpatialEntity
Pseudo3D()
- outputResultsToImage()
- convertAlpha()
- convertBeta()
multiscale::analysis
::ClusterDetector
entityPileupDegree
eps
minPoints
clusters
- TRACKBAR_EPS
- TRACKBAR_MINPOINTS
- MIN_POINTS_MIN
- MIN_POINTS_MAX
- EPS_MIN
- EPS_MAX
- EPS_REAL_MIN
- EPS_REAL_MAX
+ ClusterDetector()
+ ~ClusterDetector()
+ getEps()
+ getMinPoints()
+ getClusters()
+ setEps()
+ setMinPoints()
# initialiseDetectorSpecific
Fields()
# createDetectorSpecificTrackbars()
# clearPreviousDetectionResults()
# processImageAndDetect()
# detectEntitiesInImage()
# detectAndAnalyseClusters()
# detectClusters()
# convertEntities()
# convertNonPiledUpEntities()
# convertPiledUpEntities()
# addEntitiesToClusters()
# analyseClusters()
# analyseClustersOriginDependent
Values()
# updateClusterOriginDependent
Values()
# getClusterConvexHull()
# computeClusterednessIndex()
# computeAveragePileUpDegree()
# getCollectionOfSpatialEntity
Pseudo3D()
# isNonEmptyCluster()
# convertEpsValue()
# getValidMinPointsValue()
multiscale::analysis
::SimulationClusterDetector
- thresholdedImage
- height
- width
- entityHeight
- entityWidth
- THRESHOLD
- THRESHOLD_MAX
- ENTITY_THRESH
- DATAPOINT_WIDTH
- DATAPOINT_THICKNESS
+ SimulationClusterDetector()
+ ~SimulationClusterDetector()
- initialiseDetectorSpecific
ImageDependentFields()
- initialiseThresholdedImage()
- detectEntitiesInImage()
- isEntityAtPosition()
- getEntityCentrePoint()
- getEntityContourPoints()
- computePileUpDegreeAtPosition()
- outputResultsToImage()
- outputClusterToImage()
- outputClusterShape()
- outputClusterTriangularShape()
- outputClusterRectangular
Shape()
- outputClusterCircularShape()