AR.Drone Controller

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- def quit

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- tuple CONTROLLER = basicDroneController()
- tuple root = tk.Tk()
- tuple img = tk.PhotoImage(file=CONTROLLER.PATH+'/media/softwarelogo.gif')
- tuple app = ardroneGUIController(root, CONTROLLER)

1.1.1 Function Documentation

1.1.1.1 def ardrone_gui_controller.quit ( )

Definition at line 9 of file ardrone_gui_controller.py.

1.1.2 Variable Documentation

1.1.2.1 tuple ardrone_gui_controller.app = ardroneGUIController(root, CONTROLLER)

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Definition at line 24 of file ardrone_gui_controller.py.

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1.2 ardroneguicontroller Namespace Reference

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Chapter 2

Class Documentation

2.1 ardroneguicontroller.ardroneGUIController Class Reference

Public Member Functions

- def __init__
- def getParameters
- def setParameters
- def startKeyCtrl
- def startGameCtrl
- def startAICtrl
- def toggleController

Public Attributes

- master
- frame
- controller
- var1
- var2
- sva
- paramAR
- namespace
- paramARRos
- app

2.1.1 Detailed Description

Definition at line 9 of file ardroneguicontroller.py.

2.1.2 Constructor & Destructor Documentation

2.1.2.1 def ardroneguicontroller.ardroneGUIController.__init__ (*self, root, CONTROLLER*)

Definition at line 10 of file ardroneguicontroller.py.

2.1.3 Member Function Documentation

2.1.3.1 def ardroneguicontroller.ardroneGUIController.getParameters (*self*)

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2.1.3.3 def ardroneguicontroller.ardroneGUIController.startAICtrl (*self*)

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2.1.3.4 def ardroneguicontroller.ardroneGUIController.startGameCtrl (*self*)

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2.1.3.5 def ardroneguicontroller.ardroneGUIController.startKeyCtrl (*self*)

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2.1.3.6 def ardroneguicontroller.ardroneGUIController.toggleController (*self, controller*)

Definition at line 88 of file ardroneguicontroller.py.

2.1.4 Member Data Documentation

2.1.4.1 ardroneguicontroller.ardroneGUIController.app

Definition at line 80 of file ardroneguicontroller.py.

2.1.4.2 ardroneguicontroller.ardroneGUIController.controller

Definition at line 14 of file ardroneguicontroller.py.

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2.1.4.9 ardroneguicontroller.ardroneGUIController.var1

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2.1.4.10 ardroneguicontroller.ardroneGUIController.var2

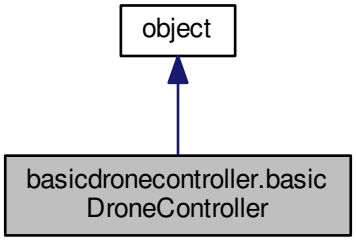
Definition at line 29 of file ardroneguicontroller.py.

The documentation for this class was generated from the following file:

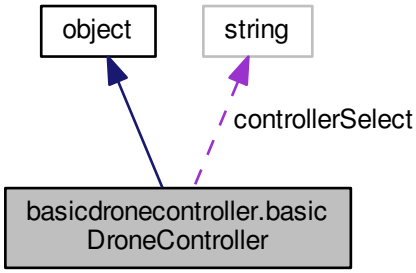
- ardroneguicontroller.py

2.2 basicdronecontroller.basicDroneController Class Reference

Inheritance diagram for basicdronecontroller.basicDroneController:



Collaboration diagram for basicdronecontroller.basicDroneController:



Public Member Functions

- def __init__
- def receiveNavdata
- def sendtakeoff
- def sendLand
- def sendEmergency
- def setCommand
- def sendCommand
- def landBeforeExit

Public Attributes

- status
- PATH
- COMMAND_PERIOD
- subNavdata
- pubLand
- pubtakeoff
- pubReset
- pubCommand
- command
- commandTimer

Static Public Attributes

- string controllerSelect = "None"

2.2.1 Detailed Description

Definition at line 20 of file basicdronecontroller.py.

2.2.2 Constructor & Destructor Documentation

2.2.2.1 def basicdronecontroller.basicDroneController.__init__ (*self*)

Definition at line 23 of file basicdronecontroller.py.

2.2.3 Member Function Documentation

2.2.3.1 def basicdronecontroller.basicDroneController.landBeforeExit (*self*)

Definition at line 83 of file basicdronecontroller.py.

2.2.3.2 def basicdronecontroller.basicDroneController.receiveNavdata (*self, navdata*)

Definition at line 47 of file basicdronecontroller.py.

2.2.3.3 def basicdronecontroller.basicDroneController.sendCommand (*self, event*)

Definition at line 78 of file basicdronecontroller.py.

2.2.3.4 def basicdronecontroller.basicDroneController.sendEmergency (*self, ID*)

Definition at line 63 of file basicdronecontroller.py.

2.2.3.5 def basicdronecontroller.basicDroneController.sendLand (*self, ID*)

Definition at line 57 of file basicdronecontroller.py.

2.2.3.6 def basicdronecontroller.basicDroneController.sendtakeoff (*self, ID*)

Definition at line 51 of file basicdronecontroller.py.

2.2.3.7 def basicdronecontroller.basicDroneController.setCommand (*self, roll* = `0`, *pitch* = `0`, *yaw_velocity* = `0`, *z_velocity* = `0`, *ID* = `"None"`)

Definition at line 68 of file basicdronecontroller.py.

2.2.4 Member Data Documentation

2.2.4.1 basicdronecontroller.basicDroneController.command

Definition at line 41 of file basicdronecontroller.py.

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Definition at line 28 of file basicdronecontroller.py.

2.2.4.3 basicdronecontroller.basicDroneController.commandTimer

Definition at line 42 of file basicdronecontroller.py.

2.2.4.4 string basicdronecontroller.basicDroneController.controllerSelect = "None" [static]

Definition at line 21 of file basicdronecontroller.py.

2.2.4.5 basicdronecontroller.basicDroneController.PATH

Definition at line 27 of file basicdronecontroller.py.

2.2.4.6 basicdronecontroller.basicDroneController.pubCommand

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2.2.4.8 basicdronecontroller.basicDroneController.pubReset

Definition at line 35 of file basicdronecontroller.py.

2.2.4.9 basicdronecontroller.basicDroneController.pubtakeoff

Definition at line 34 of file basicdronecontroller.py.

2.2.4.10 basicdronecontroller.basicDroneController.status

Definition at line 25 of file basicdronecontroller.py.

2.2.4.11 basicdronecontroller.basicDroneController.subNavdata

Definition at line 30 of file basicdronecontroller.py.

The documentation for this class was generated from the following file:

- basicdronecontroller.py

2.3 clusterNode.Cluster Class Reference

Public Member Functions

- def __init__
- def __repr__
- def update
- def calculateCentroid
- def getSingleDistance
- def getCompleteDistance
- def getCentroidDistance
- def fuse
- def getDistance

Public Attributes

- points
- n
- centroid

2.3.1 Detailed Description

Definition at line 22 of file clusterNode.py.

2.3.2 Constructor & Destructor Documentation

2.3.2.1 def clusterNode.Cluster.__init__ (*self, points*)

Definition at line 28 of file clusterNode.py.

2.3.3 Member Function Documentation

2.3.3.1 def clusterNode.Cluster.__repr__ (*self*)

Definition at line 40 of file clusterNode.py.

2.3.3.2 def clusterNode.Cluster.calculateCentroid (*self*)

Definition at line 51 of file clusterNode.py.

2.3.3.3 def clusterNode.Cluster.fuse (*self, cluster*)

Definition at line 82 of file clusterNode.py.

2.3.3.4 def clusterNode.Cluster.getCentroidDistance (*self, cluster*)

Definition at line 79 of file clusterNode.py.

2.3.3.5 def clusterNode.Cluster.getCompleteDistance (*self, cluster*)

Definition at line 71 of file clusterNode.py.

2.3.3.6 def clusterNode.Cluster.getDistance (*self, a, b*)

Definition at line 90 of file clusterNode.py.

2.3.3.7 def clusterNode.Cluster.getSingleDistance (*self, cluster*)

Definition at line 63 of file clusterNode.py.

2.3.3.8 def clusterNode.Cluster.update (*self, points*)

Definition at line 44 of file clusterNode.py.

2.3.4 Member Data Documentation

2.3.4.1 clusterNode.Cluster.centroid

Definition at line 38 of file clusterNode.py.

2.3.4.2 clusterNode.Cluster.n

Definition at line 32 of file clusterNode.py.

2.3.4.3 clusterNode.Cluster.points

Definition at line 31 of file clusterNode.py.

The documentation for this class was generated from the following file:

- clusterNode.py

2.4 clusterNode.clusterNode Class Reference

Public Member Functions

- def __init__

  Initialize point clustering class.
- def reset
- def update
- def processPoints

  Process incoming points.
- def agglomerativeClustering
- def makeDistanceMatrix

Public Attributes

- linkage
- agglo_cutoff
- verbosity
- pointArray
- maxAmountOfPoints
- targetLocked
- targetPoint
- targetLabel
- tf_listener
- log
- targetMarkers
- goalMarker

2.4.1 Detailed Description

Definition at line 100 of file clusterNode.py.

2.4.2 Constructor & Destructor Documentation

2.4.2.1 def clusterNode.clusterNode.__init__ (*self, targetLABEL, LOG, detectionPUB, goalPUB, linkage, agglo_cutoff, AMOUNTOFPOINTS*)

Initialize point clustering class.

Definition at line 103 of file clusterNode.py.

2.4.3 Member Function Documentation

2.4.3.1 def clusterNode.clusterNode.agglomerativeClustering (*self, points, linkage, cutoff, verbosity*)

Definition at line 158 of file clusterNode.py.

2.4.3.2 def clusterNode.clusterNode.makeDistanceMatrix (*self, clusters, linkage*)

Definition at line 218 of file clusterNode.py.

2.4.3.3 def clusterNode.clusterNode.processPoints (*self, pointStamped*)

Process incoming points.

Project to '/map' coordinates and puts them into an array

Definition at line 138 of file clusterNode.py.

2.4.3.4 def clusterNode.clusterNode.reset (*self*)

Definition at line 123 of file clusterNode.py.

2.4.3.5 def clusterNode.clusterNode.update (*self*)

Definition at line 130 of file clusterNode.py.

2.4.4 Member Data Documentation

2.4.4.1 clusterNode.clusterNode.agglo_cutoff

Definition at line 106 of file clusterNode.py.

2.4.4.2 clusterNode.clusterNode.goalMarker

Definition at line 120 of file clusterNode.py.

2.4.4.3 clusterNode.clusterNode.linkage

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2.4.4.4 clusterNode.clusterNode.log

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2.4.4.5 clusterNode.clusterNode.maxAmountOfPoints

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2.4.4.6 clusterNode.clusterNode.pointArray

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2.4.4.10 clusterNode.clusterNode.targetPoint

Definition at line 112 of file clusterNode.py.

2.4.4.11 clusterNode.clusterNode.tf_listener

Definition at line 115 of file clusterNode.py.

2.4.4.12 clusterNode.clusterNode.verbosity

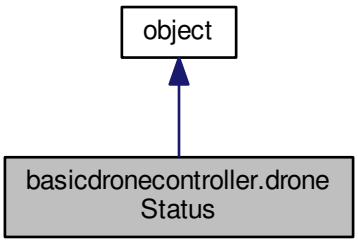
Definition at line 107 of file clusterNode.py.

The documentation for this class was generated from the following file:

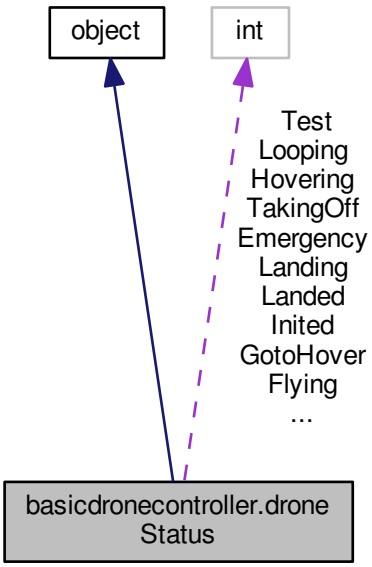
- clusterNode.py

2.5 basicdronecontroller.droneStatus Class Reference

Inheritance diagram for basicdronecontroller.droneStatus:



Collaboration diagram for basicdronecontroller.droneStatus:



Static Public Attributes

- int Emergency = 0
- int Inited = 1
- int Landed = 2
- int Flying = 3
- int Hovering = 4
- int Test = 5

- int TakingOff = 6
- int GotoHover = 7
- int Landing = 8
- int Looping = 9

2.5.1 Detailed Description

Definition at line 8 of file basicdronecontroller.py.

2.5.2 Member Data Documentation

2.5.2.1 int basicdronecontroller.droneStatus.Emergency = 0 [static]

Definition at line 9 of file basicdronecontroller.py.

2.5.2.2 int basicdronecontroller.droneStatus.Flying = 3 [static]

Definition at line 12 of file basicdronecontroller.py.

2.5.2.3 int basicdronecontroller.droneStatus.GotoHover = 7 [static]

Definition at line 16 of file basicdronecontroller.py.

2.5.2.4 int basicdronecontroller.droneStatus.Hovering = 4 [static]

Definition at line 13 of file basicdronecontroller.py.

2.5.2.5 int basicdronecontroller.droneStatus.Inited = 1 [static]

Definition at line 10 of file basicdronecontroller.py.

2.5.2.6 int basicdronecontroller.droneStatus.Landed = 2 [static]

Definition at line 11 of file basicdronecontroller.py.

2.5.2.7 int basicdronecontroller.droneStatus.Landing = 8 [static]

Definition at line 17 of file basicdronecontroller.py.

2.5.2.8 int basicdronecontroller.droneStatus.Looping = 9 [static]

Definition at line 18 of file basicdronecontroller.py.

2.5.2.9 int basicdronecontroller.droneStatus.TakingOff = 6 [static]

Definition at line 15 of file basicdronecontroller.py.

2.5.2.10 int basicdronecontroller.droneStatus.Test = 5 [static]

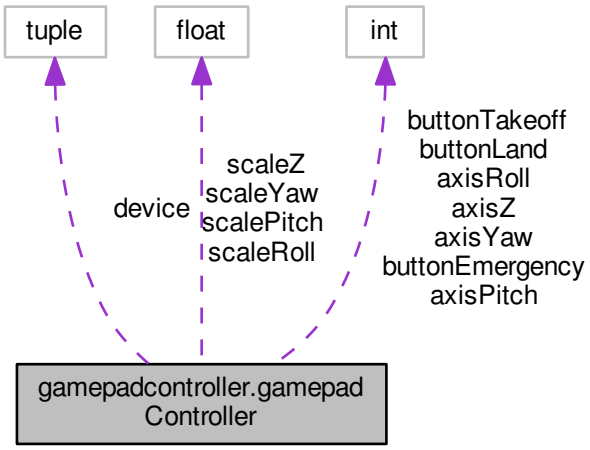
Definition at line 14 of file basicdronecontroller.py.

The documentation for this class was generated from the following file:

- basicdronecontroller.py

2.6 gamepadcontroller.gamepadController Class Reference

Collaboration diagram for gamepadcontroller.gamepadController:



Public Member Functions

- def __init__
- def ReceiveJoystickMessage
- def close

Public Attributes

- ID
- window
- controller
- process
- buttonEmergency
- buttonLand
- buttonTakeoff
- axisRoll
- axisPitch
- axisYaw
- axisZ
- scaleRoll

- scalePitch
- scaleYaw
- scaleZ
- subJoystick

Static Public Attributes

- tuple device = commands.getoutput('ls /dev/input/js*')
- int buttonEmergency = 0
- int buttonLand = 1
- int buttonTakeoff = 2
- int axisRoll = 0
- int axisPitch = 1
- int axisYaw = 3
- int axisZ = 4
- float scaleRoll = 1.0
- float scalePitch = 1.0
- float scaleYaw = 1.0
- float scaleZ = 1.0

2.6.1 Detailed Description

Definition at line 5 of file gamepadcontroller.py.

2.6.2 Constructor & Destructor Documentation

2.6.2.1 def gamepadcontroller.gamepadController.__init__ (*self, master, CONTROLLER*)

Definition at line 27 of file gamepadcontroller.py.

2.6.3 Member Function Documentation

2.6.3.1 def gamepadcontroller.gamepadController.close (*self*)

Definition at line 84 of file gamepadcontroller.py.

2.6.3.2 def gamepadcontroller.gamepadController.ReceiveJoystickMessage (*self, data*)

Definition at line 71 of file gamepadcontroller.py.

2.6.4 Member Data Documentation

2.6.4.1 int gamepadcontroller.gamepadController.axisPitch = 1 [static]

Definition at line 16 of file gamepadcontroller.py.

2.6.4.2 gamepadcontroller.gamepadController.axisPitch

Definition at line 59 of file gamepadcontroller.py.

2.6.4.3 int gamepadcontroller.gamepadController.axisRoll = 0 [static]

Definition at line 15 of file gamepadcontroller.py.

2.6.4.4 gamepadcontroller.gamepadController.axisRoll

Definition at line 58 of file gamepadcontroller.py.

2.6.4.5 int gamepadcontroller.gamepadController.axisYaw = 3 [static]

Definition at line 17 of file gamepadcontroller.py.

2.6.4.6 gamepadcontroller.gamepadController.axisYaw

Definition at line 60 of file gamepadcontroller.py.

2.6.4.7 int gamepadcontroller.gamepadController.axisZ = 4 [static]

Definition at line 18 of file gamepadcontroller.py.

2.6.4.8 gamepadcontroller.gamepadController.axisZ

Definition at line 61 of file gamepadcontroller.py.

2.6.4.9 int gamepadcontroller.gamepadController.buttonEmergency = 0 [static]

Definition at line 10 of file gamepadcontroller.py.

2.6.4.10 gamepadcontroller.gamepadController.buttonEmergency

Definition at line 55 of file gamepadcontroller.py.

2.6.4.11 int gamepadcontroller.gamepadController.buttonLand = 1 [static]

Definition at line 11 of file gamepadcontroller.py.

2.6.4.12 gamepadcontroller.gamepadController.buttonLand

Definition at line 56 of file gamepadcontroller.py.

2.6.4.13 int gamepadcontroller.gamepadController.buttonTakeoff = 2 [static]

Definition at line 12 of file gamepadcontroller.py.

2.6.4.14 gamepadcontroller.gamepadController.buttonTakeoff

Definition at line 57 of file gamepadcontroller.py.

2.6.4.15 gamepadcontroller.gamepadController.controller

Definition at line 35 of file gamepadcontroller.py.

2.6.4.16 tuple gamepadcontroller.gamepadController.device = commands.getoutput('ls /dev/input/js*') [static]

Definition at line 7 of file gamepadcontroller.py.

2.6.4.17 gamepadcontroller.gamepadController.ID

Definition at line 28 of file gamepadcontroller.py.

2.6.4.18 gamepadcontroller.gamepadController.process

Definition at line 51 of file gamepadcontroller.py.

2.6.4.19 float gamepadcontroller.gamepadController.scalePitch = 1.0 [static]

Definition at line 22 of file gamepadcontroller.py.

2.6.4.20 gamepadcontroller.gamepadController.scalePitch

Definition at line 63 of file gamepadcontroller.py.

2.6.4.21 float gamepadcontroller.gamepadController.scaleRoll = 1.0 [static]

Definition at line 21 of file gamepadcontroller.py.

2.6.4.22 gamepadcontroller.gamepadController.scaleRoll

Definition at line 62 of file gamepadcontroller.py.

2.6.4.23 float gamepadcontroller.gamepadController.scaleYaw = 1.0 [static]

Definition at line 23 of file gamepadcontroller.py.

2.6.4.24 gamepadcontroller.gamepadController.scaleYaw

Definition at line 64 of file gamepadcontroller.py.

2.6.4.25 float gamepadcontroller.gamepadController.scaleZ = 1.0 [static]

Definition at line 24 of file gamepadcontroller.py.

2.6.4.26 gamepadcontroller.gamepadController.scaleZ

Definition at line 65 of file gamepadcontroller.py.

2.6.4.27 gamepadcontroller.gamepadController.subJoystick

Definition at line 68 of file gamepadcontroller.py.

2.6.4.28 gamepadcontroller.gamepadController.window

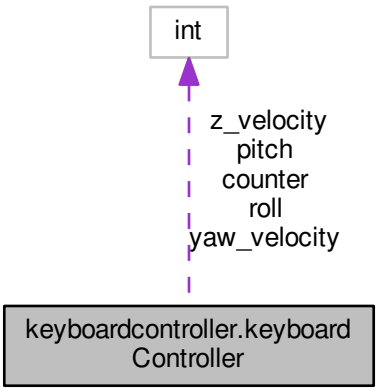
Definition at line 29 of file gamepadcontroller.py.

The documentation for this class was generated from the following file:

- gamepadcontroller.py

2.7 keyboardcontroller.keyboardController Class Reference

Collaboration diagram for keyboardcontroller.keyboardController:



Public Member Functions

- def __init__
- def onkeyrelease
- def key

Public Attributes

- ID
- window
- controller
- pitch
- roll
- yaw_velocity
- z_velocity

Static Public Attributes

- int pitch = 0
- int roll = 0
- int yaw_velocity = 0
- int z_velocity = 0
- int counter = 0

2.7.1 Detailed Description

Definition at line 21 of file keyboardcontroller.py.

2.7.2 Constructor & Destructor Documentation

2.7.2.1 def keyboardcontroller.keyboardController.__init__ (*self, master, CONTROLLER*)

Definition at line 27 of file keyboardcontroller.py.

2.7.3 Member Function Documentation

2.7.3.1 def keyboardcontroller.keyboardController.key (*self, event*)

Definition at line 48 of file keyboardcontroller.py.

2.7.3.2 def keyboardcontroller.keyboardController.onkeyrelease (*self, event*)

Definition at line 41 of file keyboardcontroller.py.

2.7.4 Member Data Documentation

2.7.4.1 keyboardcontroller.keyboardController.controller

Definition at line 38 of file keyboardcontroller.py.

2.7.4.2 int keyboardcontroller.keyboardController.counter = 0 [static]

Definition at line 26 of file keyboardcontroller.py.

2.7.4.3 keyboardcontroller.keyboardController.ID

Definition at line 28 of file keyboardcontroller.py.

2.7.4.4 int keyboardcontroller.keyboardController.pitch = 0 [static]

Definition at line 22 of file keyboardcontroller.py.

2.7.4.5 keyboardcontroller.keyboardController.pitch

Definition at line 42 of file keyboardcontroller.py.

2.7.4.6 int keyboardcontroller.keyboardController.roll = 0 [static]

Definition at line 23 of file keyboardcontroller.py.

2.7.4.7 keyboardcontroller.keyboardController.roll

Definition at line 43 of file keyboardcontroller.py.

2.7.4.8 keyboardcontroller.keyboardController.window

Definition at line 29 of file keyboardcontroller.py.

2.7.4.9 int keyboardcontroller.keyboardController.yaw_velocity = 0 [static]

Definition at line 24 of file keyboardcontroller.py.

2.7.4.10 keyboardcontroller.keyboardController.yaw_velocity

Definition at line 44 of file keyboardcontroller.py.

2.7.4.11 int keyboardcontroller.keyboardController.z_velocity = 0 [static]

Definition at line 25 of file keyboardcontroller.py.

2.7.4.12 keyboardcontroller.keyboardController.z_velocity

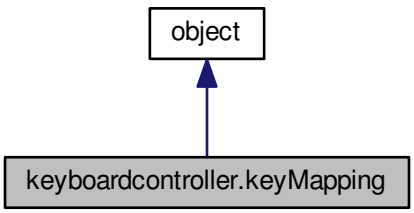
Definition at line 45 of file keyboardcontroller.py.

The documentation for this class was generated from the following file:

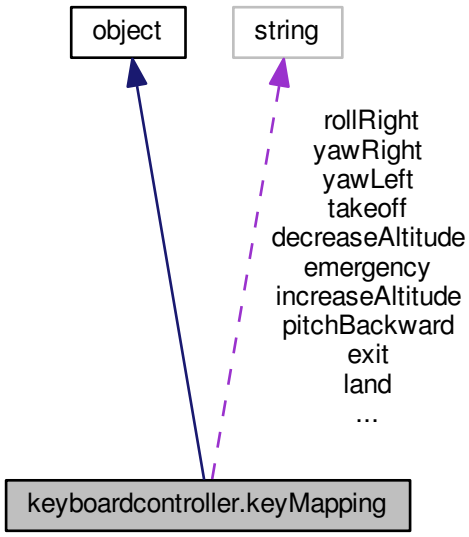
- keyboardcontroller.py

2.8 keyboardcontroller.keyMapping Class Reference

Inheritance diagram for keyboardcontroller.keyMapping:



Collaboration diagram for keyboardcontroller.keyMapping:



Static Public Attributes

- string pitchForward = "e"
- string pitchBackward = "d"
- string rollLeft = "s"
- string rollRight = "f"
- string yawLeft = "j"
- string yawRight = "l"
- string increaseAltitude = "i"
- string decreaseAltitude = "k"
- string takeoff = "t"
- string land = "y"
- string emergency = "u"
- string exit = "C"

2.8.1 Detailed Description

Definition at line 6 of file keyboardcontroller.py.

2.8.2 Member Data Documentation

2.8.2.1 string keyboardcontroller.keyMapping.decreaseAltitude = "k" [static]

Definition at line 14 of file keyboardcontroller.py.

2.8.2.2 string keyboardcontroller.keyMapping.emergency = "u" [static]

Definition at line 17 of file keyboardcontroller.py.

2.8.2.3 string keyboardcontroller.keyMapping.exit = "C" [static]

Definition at line 18 of file keyboardcontroller.py.

2.8.2.4 string keyboardcontroller.keyMapping.increaseAltitude = "i" [static]

Definition at line 13 of file keyboardcontroller.py.

2.8.2.5 string keyboardcontroller.keyMapping.land = "y" [static]

Definition at line 16 of file keyboardcontroller.py.

2.8.2.6 string keyboardcontroller.keyMapping.pitchBackward = "d" [static]

Definition at line 8 of file keyboardcontroller.py.

2.8.2.7 string keyboardcontroller.keyMapping.pitchForward = "e" [static]

Definition at line 7 of file keyboardcontroller.py.

2.8.2.8 string keyboardcontroller.keyMapping.rollLeft = "s" [static]

Definition at line 9 of file keyboardcontroller.py.

2.8.2.9 string keyboardcontroller.keyMapping.rollRight = "f" [static]

Definition at line 10 of file keyboardcontroller.py.

2.8.2.10 string keyboardcontroller.keyMapping.takeoff = "t" [static]

Definition at line 15 of file keyboardcontroller.py.

2.8.2.11 string keyboardcontroller.keyMapping.yawLeft = "j" [static]

Definition at line 11 of file keyboardcontroller.py.

2.8.2.12 string keyboardcontroller.keyMapping.yawRight = "l" [static]

Definition at line 12 of file keyboardcontroller.py.

The documentation for this class was generated from the following file:

- keyboardcontroller.py

2.9 markerClass.markerArrayRVIZ Class Reference

Public Member Functions

- def __init__
- def addMarker

- def dropMarker

Public Attributes

- targetMarkerArray
- targetCount
- markerMax
- markerScale
- markerColor
- referenceFrame
- publisher

2.9.1 Detailed Description

Definition at line 7 of file markerClass.py.

2.9.2 Constructor & Destructor Documentation

2.9.2.1 def markerClass.markerArrayRVIZ.__init__ (*self, MAX, SCALE, COLOR, REFERENCEFRAME, PUBLISHER*)

Definition at line 8 of file markerClass.py.

2.9.3 Member Function Documentation

2.9.3.1 def markerClass.markerArrayRVIZ.addMarker (*self, point*)

Definition at line 17 of file markerClass.py.

2.9.3.2 def markerClass.markerArrayRVIZ.dropMarker (*self*)

Definition at line 54 of file markerClass.py.

2.9.4 Member Data Documentation

2.9.4.1 markerClass.markerArrayRVIZ.markerColor

Definition at line 13 of file markerClass.py.

2.9.4.2 markerClass.markerArrayRVIZ.markerMax

Definition at line 11 of file markerClass.py.

2.9.4.3 markerClass.markerArrayRVIZ.markerScale

Definition at line 12 of file markerClass.py.

2.9.4.4 markerClass.markerArrayRVIZ.publisher

Definition at line 15 of file markerClass.py.

2.9.4.5 markerClass.markerArrayRVIZ.referenceFrame

Definition at line 14 of file markerClass.py.

2.9.4.6 markerClass.markerArrayRVIZ.targetCount

Definition at line 10 of file markerClass.py.

2.9.4.7 markerClass.markerArrayRVIZ.targetMarkerArray

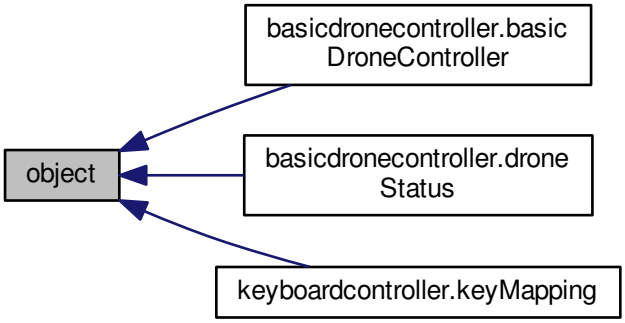
Definition at line 9 of file markerClass.py.

The documentation for this class was generated from the following file:

- markerClass.py

2.10 object Class Reference

Inheritance diagram for object:



The documentation for this class was generated from the following file:

- basicdronecontroller.py

2.11 clusterNode.Point Class Reference

Public Member Functions

- def __init__
- def __repr__

Public Attributes

- coords

- n
- reference

2.11.1 Detailed Description

Definition at line 6 of file clusterNode.py.

2.11.2 Constructor & Destructor Documentation

2.11.2.1 def clusterNode.Point.__init__ (*self, coords, reference* = None)

Definition at line 12 of file clusterNode.py.

2.11.3 Member Function Documentation

2.11.3.1 def clusterNode.Point.__repr__ (*self*)

Definition at line 17 of file clusterNode.py.

2.11.4 Member Data Documentation

2.11.4.1 clusterNode.Point.coords

Definition at line 13 of file clusterNode.py.

2.11.4.2 clusterNode.Point.n

Definition at line 14 of file clusterNode.py.

2.11.4.3 clusterNode.Point.reference

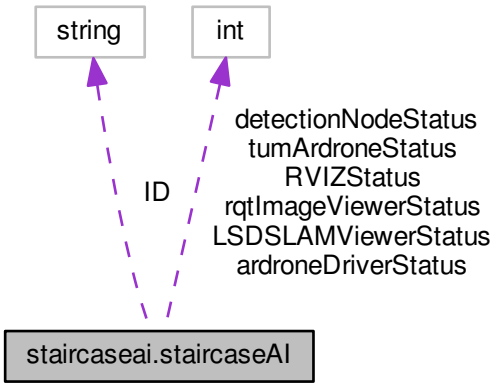
Definition at line 15 of file clusterNode.py.

The documentation for this class was generated from the following file:

- clusterNode.py

2.12 staircaseai.staircaseAI Class Reference

Collaboration diagram for staircaseai.staircaseAI:



Public Member Functions

- def __init__

  Initialize the AI class.
- def log

  Puts text in the logscreen of the AI GUI.
- def logDet

  Puts text in the logscreen of the AI GUI.
- def launchRVIZ

  Launch rviz with the custom setup that is used in ardrone_controller together with launchStaticTf()
- def launchDetectionNode

  Launch pointcloudregistration with all its related nodes: Static TF transform, Image Rectifier and LSD_SLAM.
- def launchArdroneDriver
- def launchTumArdrone
- def launchLSDSLAMViewer
- def launchrqtImageViewer
- def sendCommand
- def gotoOrigin
- def stopAI
- def goAI
- def resetEKF
- def resetPTAM
- def resetLSDSLAM
- def initLSDSLAM
- def initializeAI
- def takeoff
- def close

  Close the AI GUI interface.

Public Attributes

- window
- logText
- detectionText
- targetLockedText
- controller
- detectionMarkerPublisher
- goalMarkerPublisher
- tumComPublisher
- cluster
- targetSub
- commandEntryText
- ardroneDriverLbl
- tumArdroneLbl
- detectionNodeLbl
- RVIZLbl
- LSDSLAMViewerLbl
- rqtImageViewerLbl
- launcher
- RVIZStatus
- RVIZProcess
- detectionNodeStatus
- staticTfProcess
- imageRectifyProcess
- lsdslamProcess
- detectionProcess
- ardroneDriverStatus
- ardroneDriverProcess
- tumArdroneStatus
- droneStateestimationProcess
- droneAutopilotProcess
- droneGuiProcess
- LSDSLAMViewerStatus
- LSDSLAMViewerProcess
- rqtImageViewerStatus
- rqtImageViewerProcess

Static Public Attributes

- string ID = "AI"
- int ardroneDriverStatus = 0
- int tumArdroneStatus = 0
- int detectionNodeStatus = 0
- int RVIZStatus = 0
- int LSDSLAMViewerStatus = 0
- int rqtImageViewerStatus = 0

2.12.1 Detailed Description

Definition at line 11 of file staircaseai.py.

2.12.2 Constructor & Destructor Documentation

2.12.2.1 def staircaseai.staircaseAI.__init__ (*self, master, CONTROLLER*)

Initialize the AI class.

Definition at line 23 of file staircaseai.py.

2.12.3 Member Function Documentation

2.12.3.1 def staircaseai.staircaseAI.close (*self*)

Close the AI GUI interface.

Definition at line 377 of file staircaseai.py.

2.12.3.2 def staircaseai.staircaseAI.goAI (*self*)

Definition at line 312 of file staircaseai.py.

2.12.3.3 def staircaseai.staircaseAI.gotoOrigin (*self*)

Definition at line 303 of file staircaseai.py.

2.12.3.4 def staircaseai.staircaseAI.initializeAI (*self*)

Definition at line 346 of file staircaseai.py.

2.12.3.5 def staircaseai.staircaseAI.initLSDSLAM (*self*)

Definition at line 343 of file staircaseai.py.

2.12.3.6 def staircaseai.staircaseAI.launchArdroneDriver (*self*)

Definition at line 239 of file staircaseai.py.

2.12.3.7 def staircaseai.staircaseAI.launchDetectionNode (*self*)

Launch pointcloudregistration with all its related nodes: Static TF transform, Image Rectifier and LSD_SLAM.

Definition at line 205 of file staircaseai.py.

2.12.3.8 def staircaseai.staircaseAI.launchLSDSLAMViewer (*self*)

Definition at line 274 of file staircaseai.py.

2.12.3.9 def staircaseai.staircaseAI.launchrqtImageViewer (*self*)

Definition at line 286 of file staircaseai.py.

2.12.3.10 def staircaseai.staircaseAI.launchRVIZ (*self*)

Launch rviz with the custom setup that is used in ardrone_controller together with launchStaticTf()

Definition at line 187 of file staircaseai.py.

2.12.3.11 def staircaseai.staircaseAI.launchTumArdrone (*self*)

Definition at line 256 of file staircaseai.py.

2.12.3.12 def staircaseai.staircaseAI.log (*self, string*)

Puts text in the logscreen of the AI GUI.

Definition at line 176 of file staircaseai.py.

2.12.3.13 def staircaseai.staircaseAI.logDet (*self, string*)

Puts text in the logscreen of the AI GUI.

Definition at line 181 of file staircaseai.py.

2.12.3.14 def staircaseai.staircaseAI.resetEKF (*self*)

Definition at line 322 of file staircaseai.py.

2.12.3.15 def staircaseai.staircaseAI.resetLSDSLAM (*self*)

Definition at line 334 of file staircaseai.py.

2.12.3.16 def staircaseai.staircaseAI.resetPTAM (*self*)

Definition at line 329 of file staircaseai.py.

2.12.3.17 def staircaseai.staircaseAI.sendCommand (*self*)

Definition at line 298 of file staircaseai.py.

2.12.3.18 def staircaseai.staircaseAI.stopAI (*self*)

Definition at line 308 of file staircaseai.py.

2.12.3.19 def staircaseai.staircaseAI.takeoff (*self*)

Definition at line 371 of file staircaseai.py.

2.12.4 Member Data Documentation

2.12.4.1 staircaseai.staircaseAI.ardroneDriverLbl

Definition at line 93 of file staircaseai.py.

2.12.4.2 staircaseai.staircaseAI.ardroneDriverProcess

Definition at line 248 of file staircaseai.py.

2.12.4.3 int staircaseai.staircaseAI.ardroneDriverStatus = 0 [static]

Definition at line 14 of file staircaseai.py.

2.12.4.4 staircaseai.staircaseAI.ardroneDriverStatus

Definition at line 240 of file staircaseai.py.

2.12.4.5 staircaseai.staircaseAI.cluster

Definition at line 57 of file staircaseai.py.

2.12.4.6 staircaseai.staircaseAI.commandEntryText

Definition at line 75 of file staircaseai.py.

2.12.4.7 staircaseai.staircaseAI.controller

Definition at line 51 of file staircaseai.py.

2.12.4.8 staircaseai.staircaseAI.detectionMarkerPublisher

Definition at line 54 of file staircaseai.py.

2.12.4.9 staircaseai.staircaseAI.detectionNodeLbl

Definition at line 99 of file staircaseai.py.

2.12.4.10 int staircaseai.staircaseAI.detectionNodeStatus = 0 [static]

Definition at line 16 of file staircaseai.py.

2.12.4.11 staircaseai.staircaseAI.detectionNodeStatus

Definition at line 206 of file staircaseai.py.

2.12.4.12 staircaseai.staircaseAI.detectionProcess

Definition at line 225 of file staircaseai.py.

2.12.4.13 staircaseai.staircaseAI.detectionText

Definition at line 44 of file staircaseai.py.

2.12.4.14 staircaseai.staircaseAI.droneAutopilotProcess

Definition at line 262 of file staircaseai.py.

2.12.4.15 staircaseai.staircaseAI.droneGuiProcess

Definition at line 264 of file staircaseai.py.

2.12.4.16 staircaseai.staircaseAI.droneStateestimationProcess

Definition at line 260 of file staircaseai.py.

2.12.4.17 staircaseai.staircaseAI.goalMarkerPublisher

Definition at line 55 of file staircaseai.py.

2.12.4.18 string staircaseai.staircaseAI.ID = "AI" [static]

Definition at line 12 of file staircaseai.py.

2.12.4.19 staircaseai.staircaseAI.imageRectifyProcess

Definition at line 212 of file staircaseai.py.

2.12.4.20 staircaseai.staircaseAI.launcher

Definition at line 166 of file staircaseai.py.

2.12.4.21 staircaseai.staircaseAI.logText

Definition at line 40 of file staircaseai.py.

2.12.4.22 staircaseai.staircaseAI.lsdslamProcess

Definition at line 217 of file staircaseai.py.

2.12.4.23 staircaseai.staircaseAI.LSDSLAMViewerLbl

Definition at line 105 of file staircaseai.py.

2.12.4.24 staircaseai.staircaseAI.LSDSLAMViewerProcess

Definition at line 278 of file staircaseai.py.

2.12.4.25 int staircaseai.staircaseAI.LSDSLAMViewerStatus = 0 [static]

Definition at line 18 of file staircaseai.py.

2.12.4.26 staircaseai.staircaseAI.LSDSLAMViewerStatus

Definition at line 275 of file staircaseai.py.

2.12.4.27 staircaseai.staircaseAI.rqtImageViewerLbl

Definition at line 108 of file staircaseai.py.

2.12.4.28 staircaseai.staircaseAI.rqtImageViewerProcess

Definition at line 290 of file staircaseai.py.

2.12.4.29 int staircaseai.staircaseAI.rqtImageViewerStatus = 0 [static]

Definition at line 19 of file staircaseai.py.

2.12.4.30 staircaseai.staircaseAI.rqtImageViewerStatus

Definition at line 287 of file staircaseai.py.

2.12.4.31 staircaseai.staircaseAI.RVIZLbl

Definition at line 102 of file staircaseai.py.

2.12.4.32 staircaseai.staircaseAI.RVIZProcess

Definition at line 193 of file staircaseai.py.

2.12.4.33 int staircaseai.staircaseAI.RVIZStatus = 0 [static]

Definition at line 17 of file staircaseai.py.

2.12.4.34 staircaseai.staircaseAI.RVIZStatus

Definition at line 188 of file staircaseai.py.

2.12.4.35 staircaseai.staircaseAI.staticTfProcess

Definition at line 209 of file staircaseai.py.

2.12.4.36 staircaseai.staircaseAI.targetLockedText

Definition at line 48 of file staircaseai.py.

2.12.4.37 staircaseai.staircaseAI.targetSub

Definition at line 58 of file staircaseai.py.

2.12.4.38 staircaseai.staircaseAI.tumArdroneLbl

Definition at line 96 of file staircaseai.py.

2.12.4.39 int staircaseai.staircaseAI.tumArdroneStatus = 0 [static]

Definition at line 15 of file staircaseai.py.

2.12.4.40 staircaseai.staircaseAI.tumArdroneStatus

Definition at line 257 of file staircaseai.py.

2.12.4.41 staircaseai.staircaseAI.tumComPublisher

Definition at line 56 of file staircaseai.py.

2.12.4.42 staircaseai.staircaseAI.window

Definition at line 26 of file staircaseai.py.

The documentation for this class was generated from the following file:

- staircaseai.py

Chapter 3

File Documentation

3.1 ardrone_gui_controller.py File Reference

Namespaces

- ardrone_gui_controller

Functions

- def ardrone_gui_controller.quit

Variables

- tuple ardrone_gui_controller.CONTROLLER = basicDroneController()
- tuple ardrone_gui_controller.root = tk.Tk()
- tuple ardrone_gui_controller.img = tk.PhotoImage(file=CONTROLLER.PATH+'/media/softwarelogo.gif')
- tuple ardrone_gui_controller.app = ardroneGUIController(root, CONTROLLER)

3.2 ardroneguicontroller.py File Reference

Classes

- class ardroneguicontroller.ardroneGUIController

Namespaces

- ardroneguicontroller

3.3 basicdronecontroller.py File Reference

Classes

- class basicdronecontroller.droneStatus
- class basicdronecontroller.basicDroneController

Namespaces

- basicdronecontroller

3.4 clusterNode.py File Reference

Classes

- class clusterNode.Point
- class clusterNode.Cluster
- class clusterNode.clusterNode

Namespaces

- clusterNode

3.5 gamepadcontroller.py File Reference

Classes

- class gamepadcontroller.gamepadController

Namespaces

- gamepadcontroller

3.6 keyboardcontroller.py File Reference

Classes

- class keyboardcontroller.keyMapping
- class keyboardcontroller.keyboardController

Namespaces

- keyboardcontroller

3.7 markerClass.py File Reference

Classes

- class markerClass.markerArrayRVIZ

Namespaces

- markerClass

3.8 staircaseai.py File Reference

Classes

- class staircaseai.staircaseAI

Namespaces

- staircaseai