Class Diagram
VOLTA

BugAlgorithm

+ point : structure{int, int}
+ pathAttribute : structure{twist, int}
+ boundary: vector<point>
+ closedPath : vector<pathAttribute>

+ generatePathPoints() : void
+ publishPath() :void

ChargeDockDetection

+ topic::map
+ chargeMarker : point
+ svmModel

+ publishChargerDocPos() : void
+ checkForChargeDock() : void
+ findChargePosition() : void
+ svmTrainer() : void

CoordinatorClass

+ startTraining() : void
+ startSlam() : void

BugControl

+ topic::map
+ closedPathPoints : vector<points>
+ twist : geometry_msgs::Twist

+ pathTraverse() : void
+ pubishControlVariables() : void

SLAM

+ mapObject
+ msg::imgFrame:cv2::Mat(int, int, int)

+ getTurtlebotImages() : void
+ publishImage() : void
+ convertImageFormat() : void

ChargeDock

+ chargeDocks : vector<point>

+ returnChargeDocks() : void