## TurtlebotMover

- velMsg: geometry\_msgs::Twist
- nh: ros: NodeHandlepubVel: ros::PublishergetVel: ros::Subscriber
- getVel: ros::Subscriber - subLaserScanner: ros::Subscriber - sub\_odometry: ros::Subscriber
- current\_pose: geometry\_msgs::Pose2D
- isGoal: bool - isObstacle: bool
- obstacleThresh: double
- newDirection: std::string
- + linX: float + angZ: float
- + TurtlebotMover()
- + velocityCallback(const geometry\_msgs::TwistConstPtr& vel): void
- + odomCallback(const nav\_msgs::Odometry::ConstPts& msg): void
- + scanEnvCallback(const sensor\_msgs::LaserScan::ConstPtr& msg): void
- + isGoalReached(geometry\_msgs::Pose2D current\_pose): bol
- + checkObstacle(): bool
- + setObstacle(bool obstacle): void
- + changeDirection(const std::string &newDirection): void
- + moveRobot(bool TEST = false): void



## **AnomalyDetector**

- nh\_:ros::NodeHandle
- $\hbox{- it\_:} image\_transport::ImageTransport\\$
- subImg\_: image\_transport:::Subscriber
- pub\_: ros::Publisher
- maskImg\_: cv::Mat
- imgCoords\_: cv::Point2i
- P\_: cv::Matx34f
- anomalyDetected\_: bool
- + cvImg\_: cv::Mat
- + AnomalyDetector(ros::NodeHandle&)
- $+ imgCallback (const\ sensor\_msgs::Image::ConstPtr\&\ msg):\ void$
- + detectAnomaly(): void
- + localizePoints(): cv::Point3f
- + getImgPoints(): void
- + localizePoints() const : cv::Point3f