```
# size_x
                               # size_y
  costmap_2d::Layer
                               # resolution
# layered_costmap_
                               # origin_x_
# current
                               # origin_y_
# enabled_
                               # costmap
# name_
                               # default_value_
# tf

    access

footprint_spec_
                                + Costmap2D()
+ Layer()
                               + Costmap2D()
+ initialize()
                               + operator=()
+ updateBounds()
                                + copyCostmapWindow()
+ updateCosts()
                               + Costmap2D()
                                + ~Costmap2D()
+ deactivate()
+ activate()
                                + getCost()
+ reset()
                               + setCost()
+ ~Layer()
                                + mapToWorld()
+ isCurrent()
                                + worldToMap()
                               and 23 more.
+ matchSize()
+ getName()
                               # copyMapRegion()
+ getFootprint()
                               # deleteMaps()
+ onFootprintChanged()
                               # resetMaps()
# onInitialize()
                               # initMaps()
                               # raytraceLine()
                                bresenham2D()

    sign()

              costmap_2d::CostmapLayer
             # has_extra_bounds_
              - extra min x
              extra_max_x
              - extra min v
              - extra max y
              + CostmapLayer()
              + isDiscretized()
              + matchSize()
              + clearArea()
              + addExtraBounds()
             # updateWithTrueOverwrite()
             # updateWithOverwrite()
              # updateWithMax()
              # updateWithAddition()
              # touch()
              # useExtraBounds()
                           Δ
              costmap_2d::ObstacleLayer
            # transformed_footprint_
            # footprint_clearing
             enabled
            # global_frame
            # max_obstacle_height_
            # projector
            # observation_subscribers_
            # observation_notifiers_
            # observation_buffers_
            # marking_buffers
# clearing_buffers
            # static_clearing_observations
            # static marking observations
            # rolling_window_
            # dsrv
            # combination_method_
            + ObstacleLayer()
            + ~ObstacleLayer()
            + onlnitialize()
            + updateBounds()
            + updateCosts()
            + activate()
            + deactivate()
            + reset()
            + laserScanCallback()
            + laserScanValidInfCallback()
            + pointCloudCallback()
            + pointCloud2Callback()
            + addStaticObservation()
            + clearStaticObservations()
            # setupDynamicReconfigure()
            # getMarkingObservations()
            # getClearingObservations()
            # raytraceFreespace()
            # updateRaytraceBounds()
            # updateFootprint()
            reconfigureCB()
               costmap 2d::VoxelLayer
             voxel_dsrv_
             publish_voxel_
             voxel_pubvoxel_grid
             - z resolution
             - origin_z
             unknown_threshold_
             mark_threshold
             size_
             clearing_endpoints_pub_
             - clearing_endpoints_
             + VoxelLayer()
             + ~VoxelLayer()
             + onlnitialize()
             + updateBounds()
             + updateOrigin()
             + isDiscretized()
             + matchSize()
             + reset()
```

setupDynamicReconfigure()

resetMaps()
- reconfigureCB()
- clearNonLethal()
- raytraceFreespace()
- worldToMap3DFloat()
- worldToMap3D()
- mapToWorld3D()

- dist()

costmap_2d::Costmap2D