

Parameter Overview

May 14, 2021

Introduction

This file contains the parameters we tuned for each specific algorithm. All parameters, which we changed from the default values, are listed.

The provided datasets and groundtruth (rosbags and txts) can be downloaded here:

[General](#) and [Groundtruth General](#)

[Wheel Odometry Challeng](#) and [Groundtruth Wheel Odometry Challeng](#)

[Floor Camera Challeng](#) and [Groundtruth Floor Camera Challeng](#)

[RGB-D Camera Challeng](#) and [Groundtruth Lidar Challeng](#)

[Lidar Challeng](#) and [Groundtruth Lidar Challeng](#)

The necessary transformations from camera image / camera imu to robot base are provided via [broad.py](#). Due to the fact that some algorithms require these transformations within a distinct time, we did not use the tf topic to provide this data.

For more information: [README](#)

Method	Parameters	Values
RTABMap	frame.id	base_footprint
	rgbd.depth_scale	2000
	rgbd.odometry/Reg/Force3DoF	true
	rgbd.odometry/Odom/Strategy	0
	rgbd.odometry/Vis/CorType	0
	rgbd.odometry/Vis/CorGuessWinSize	40
	rgbd.odometry/Vis/MaxFeature	5000
	rgbd.odometry/Vis/EstimationType	1
	rtabmap/Reg/Force3DoF	true
	rtabmap/Reg/Strategy	1
	rtabmap/Optimizer/Slam2D	true
	rtabmap/Optimizer/Strategy	1
ORB-SLAM2	Camera.fx	927.7444458007812
	Camera.fy	928.2129516601562
	Camera.cx	655.3325805664062
	Camera.cy	361.226318359375
	Camera.width	1280
	Camera.height	720
	Camera.bf	75.014456792
	ORBextractor.scaleFactor	1.25
	ORBextractor.iniThFAST	20
	ORBextractor.minThFAST	6
	ORBextractor.nLevels	8
	ORBextractor.nFeatures	1000
HECTOR SLAM	base_frame	base_footprint
	odom_frame	base_footprint
GMAPPING	odom_frame	odom
	base_frame	base_footprint
	maxUrange	8.0
	maxRange	8.0
	linearUpdate	0.1
	angularUpdate	0.1
	temporalUpdate	1
	resampleThreshold	0.5
	xmin	-30
	ymin	-30
	xmax	30
	ymax	30
	delta	0.02
	particles	40
AMCL	odom_model.type	omni-corrected
	max_particles	3000
	kld.err	0.02
	update_min.a	0.20
	resample_interval	1
	transform_tolerance	0.5
	laser_max_range	8
	laser_max_beams	180
	odom_alpha1	0.1
	odom_alpha2	0.1
	odom_alpha3	0.1
	odom_alpha4	0.1