

To make a rich yet quick interpretation of LIDAR data, ping in front and pings that are  $\pm 15$  degree,  $\pm 30$  degree,  $\pm 45$  degree,  $\pm 60$  degree,  $\pm 75$  degree and  $\pm 90$  degree from front are used to check has collision or not. Pings over 90 degrees from front are not checked as they are useless since the robot is either moving forward or turning left.

Link: [https://github.com/cjcgmjs/mobile\\_robotics](https://github.com/cjcgmjs/mobile_robotics)