imports

sequence_toolkit::*
set_toolkit::*
relation_toolkit::*

DirectionTrigger

left: boolean
right: boolean
front: boolean
back: boolean

f_x lt(v: real, c: real): boolean

result==v<c

ObstacleDetector

ⓘ IEvents
ⓘ IObstacle

scan: Seq(real)

obstacle: Direction

scan: Seq(real)

obstacle: Direction

DetectorFSM

✖ data: Seq(real)
✖ dir: DirectionTrigger
π SCAN_THRESHOLD: real
ⓘ IEvents
ⓘ IObstacle

Idle

scan?data/dir = DirectionTrigger(|front = min(ran(extract(union([331,359], [0,30]), data)))<SCAN_THRESHOLD, left = min(ran(extract([31,90], data)))<SCAN_THRESHOLD, back = min(ran(extract([91,270], data)))<SCAN_THRESHOLD, right = min(ran(extract([271,330], data)))<SCAN_THRESHOLD|)

[dir.front]/obstacle!Direction::front

[dir.left]/obstacle!Direction::left

[dir.right]/obstacle!Direction::right