

# AI & Robotics

PIT: Drive Stern4most

# Goals

## The **junior-colleague**

- can implement the given PIT assignment



# Assignment



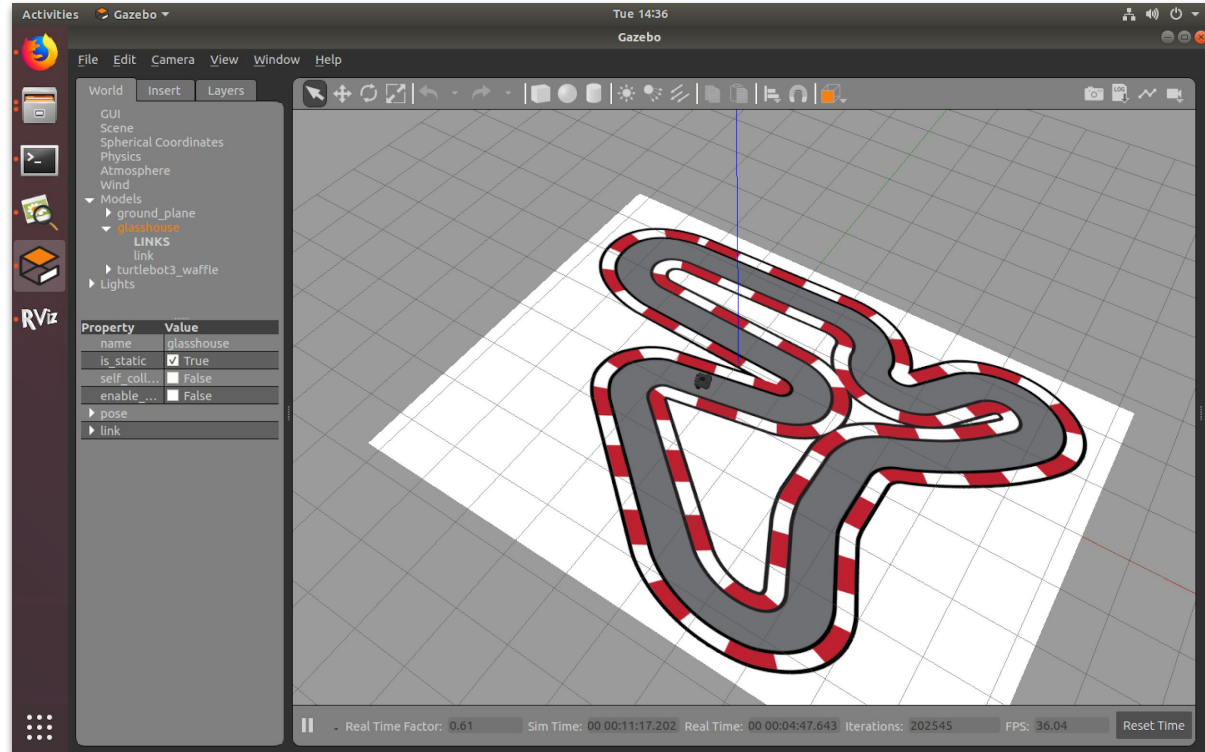
1978 TROS (DAF) Achteruit rijden

- Progressive Individual Task (PIT)
- Autonomous driving
- (awkwardly) Backwards
- ROS: Turtlebot 3 + Gazebo + Qt GUI
- Timeline
  - Monday:  
Simple race track & nodes
  - Wednesday:  
Full track with sectors  
+ Referee
  - Thursday:  
Finish up and networked race

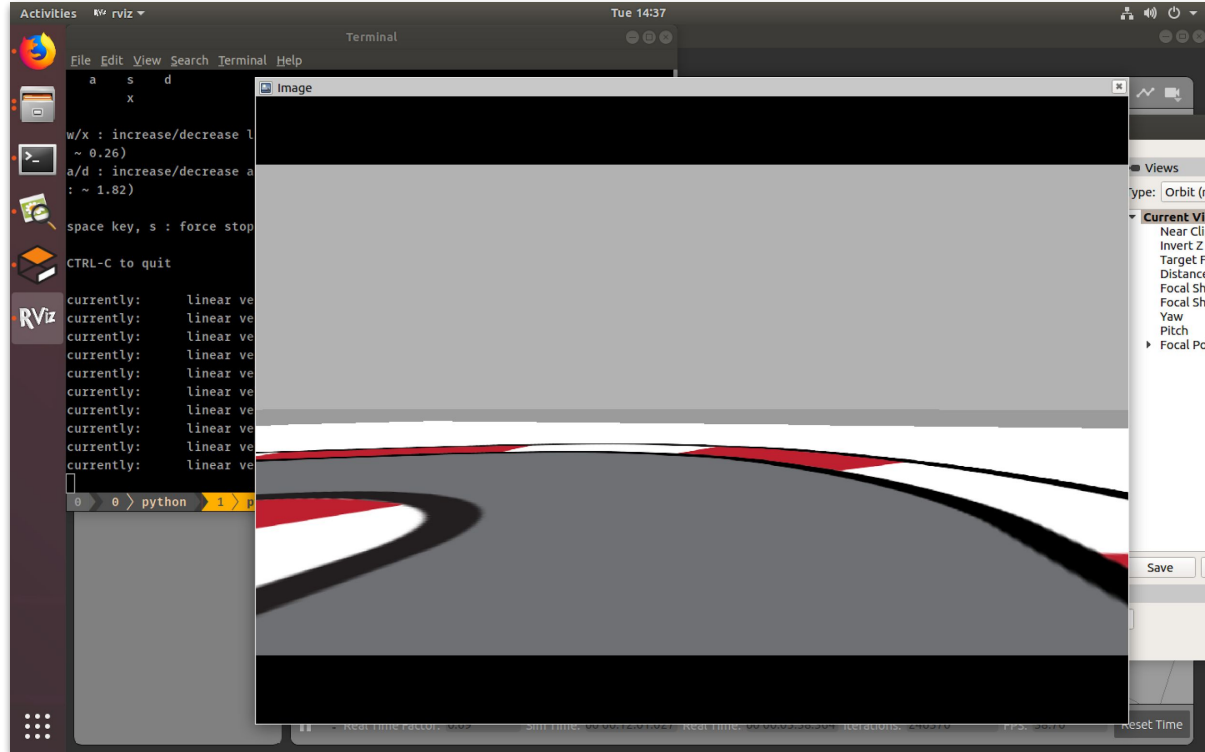
[VIDEO]

<https://www.youtube.com/watch?v=a59KyXhk74w>

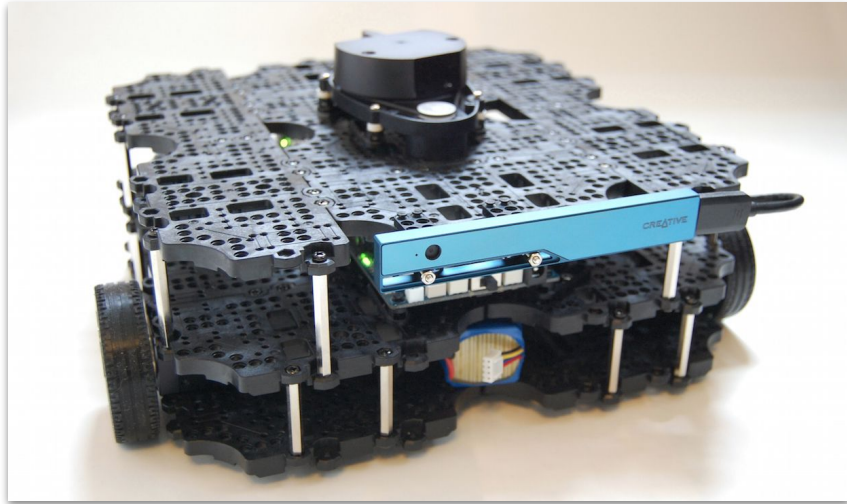
# First race track



# First race track

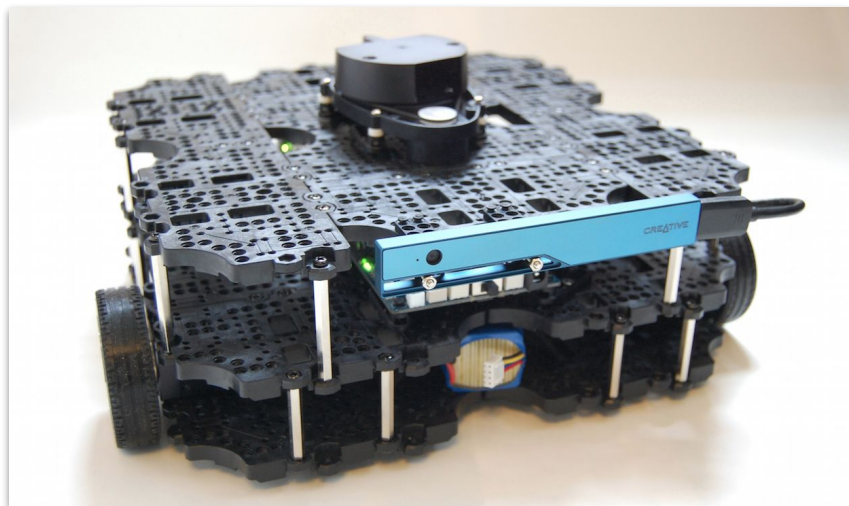


# Part one



- **stern4most\_pilot\_studnr**
  - Start / stop
  - Manual / autonomous
  - Steer the Turtlebot3
- **stern4most\_dashboard\_studnr**
  - Qt GUI to control the Turtlebot3
- **stern4most\_communication\_studnr**
  - To communicate to the referee
- **stern4most\_vision\_studnr**
  - Analyse the video
  - Feedback to pilot node

# Requirements



- Create the nodes
- Correct names
- Add Logging
- Create Qt GUI
- Start racing on your own
- Submission: your own repo

# GitHub

