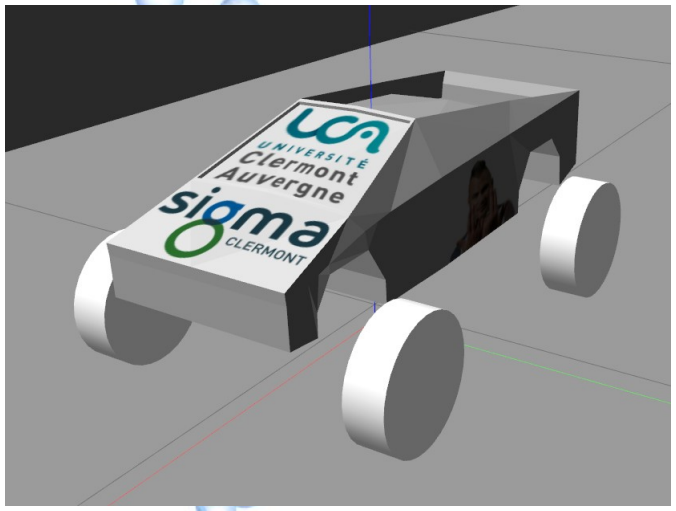
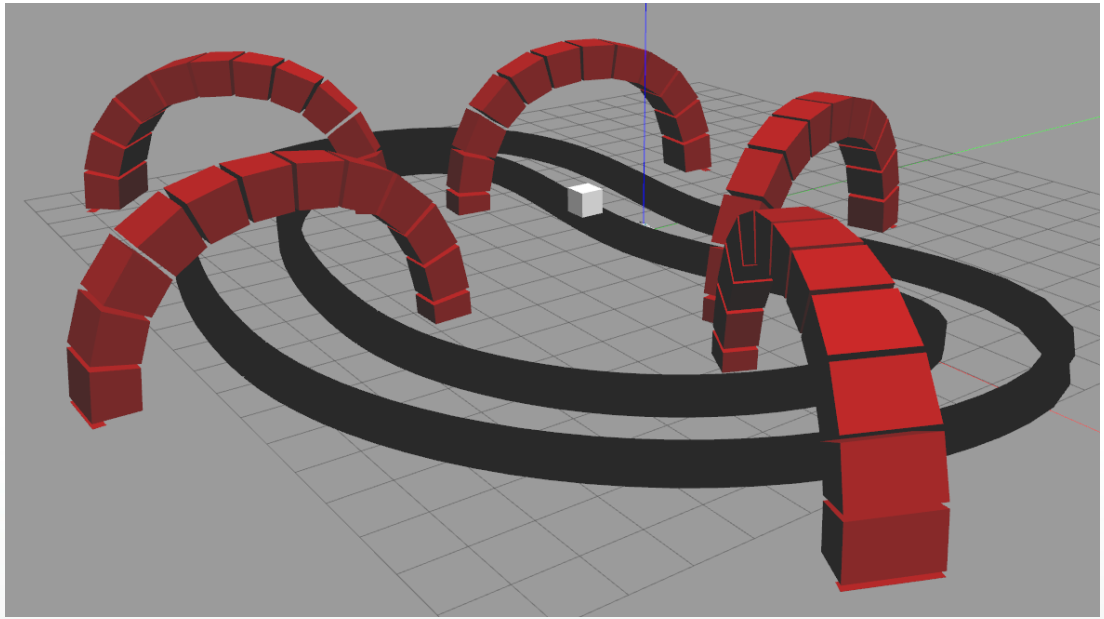
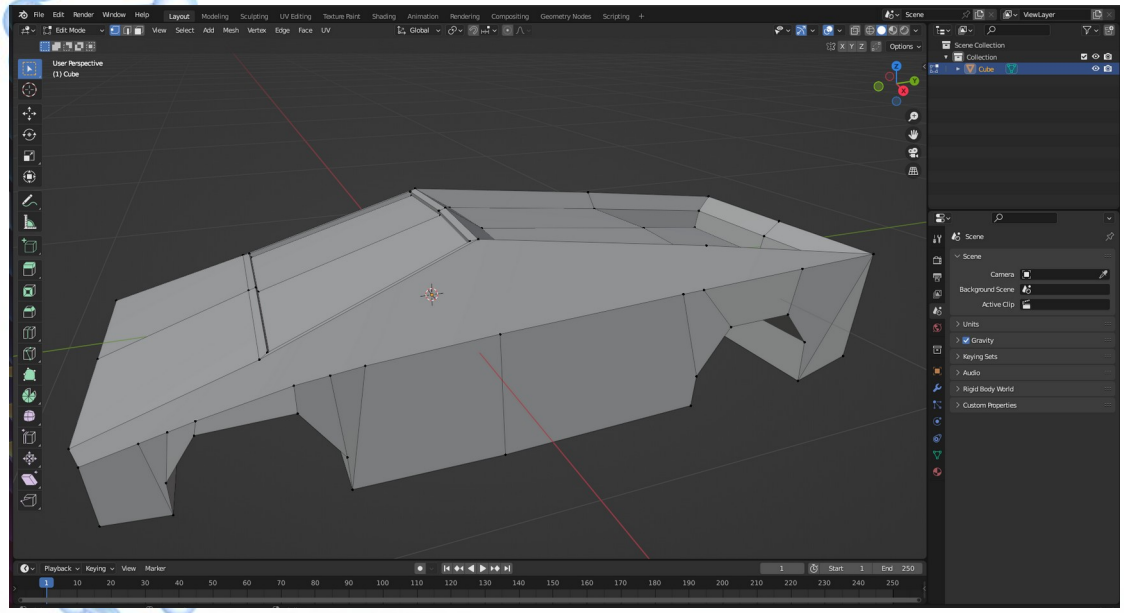
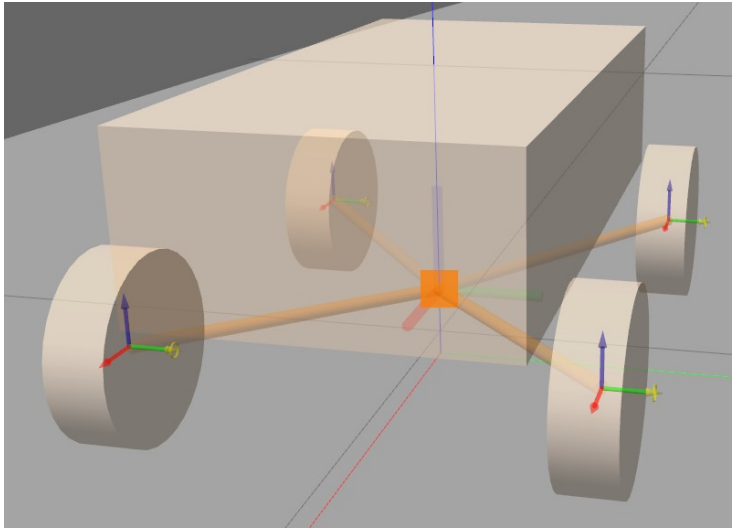
Project ROS : Car race



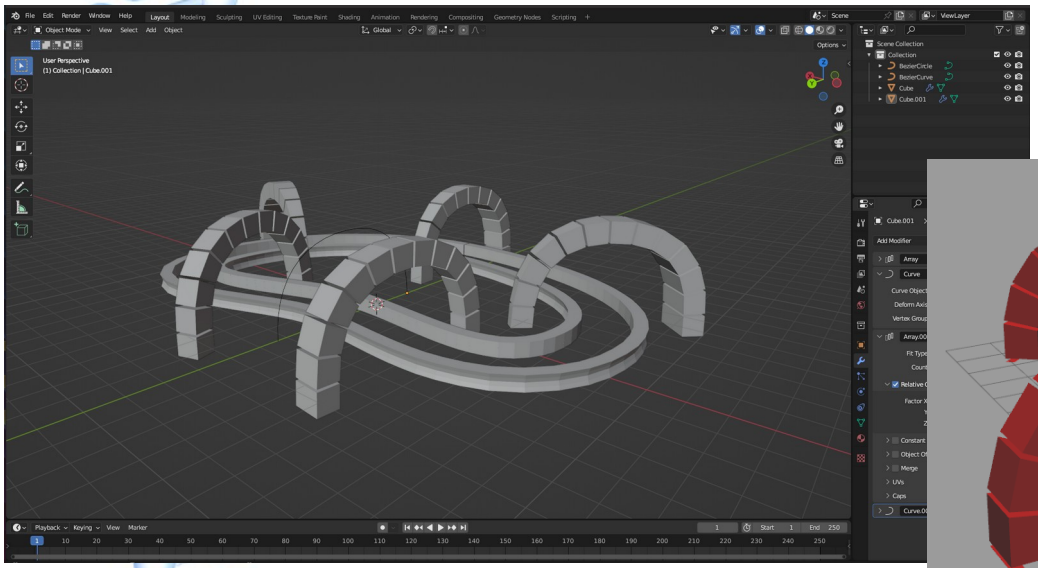


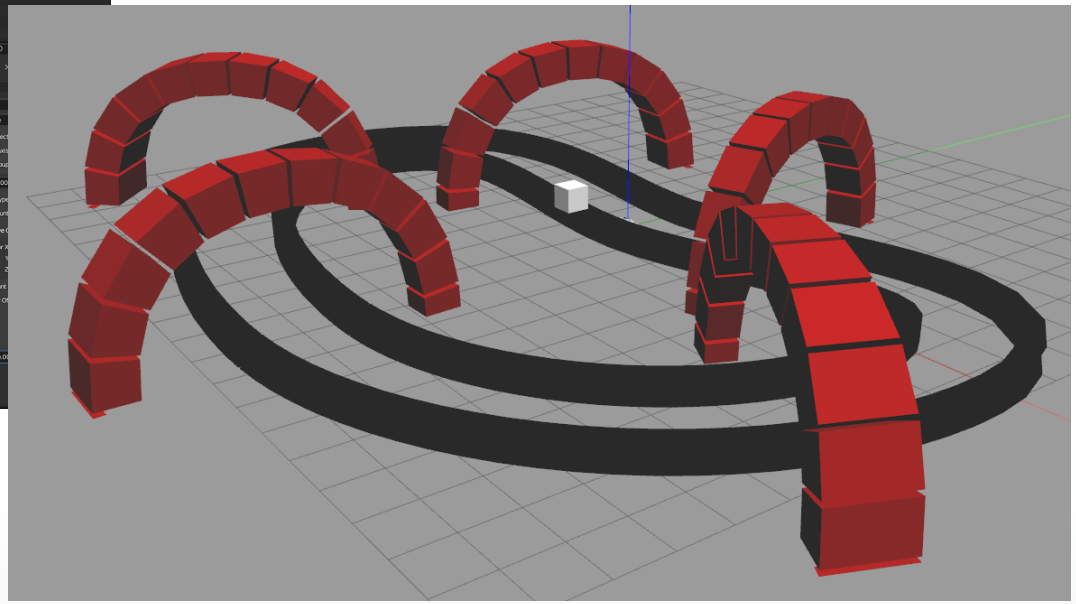
Car and road


File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Geometry Nodes Scripting
Edit Mode View Select Add Mesh Vertex Edge Face UV
Global
User Perspective
(1) Cube
Scene
ViewLayer
Scene Collection
Collection
Cube
Camera
Background Scene
Active Clip
Units
Gravity
Keying Sets
Audio
Rigid Body World
Custom Properties
Playback Keying View Marker
Start 1 End 250

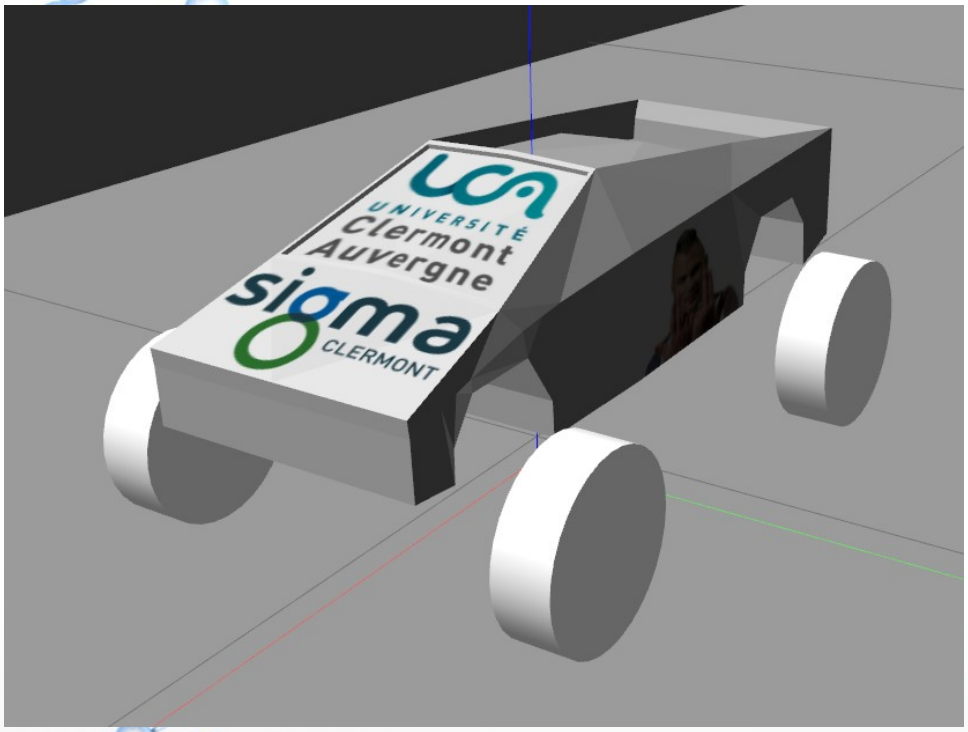


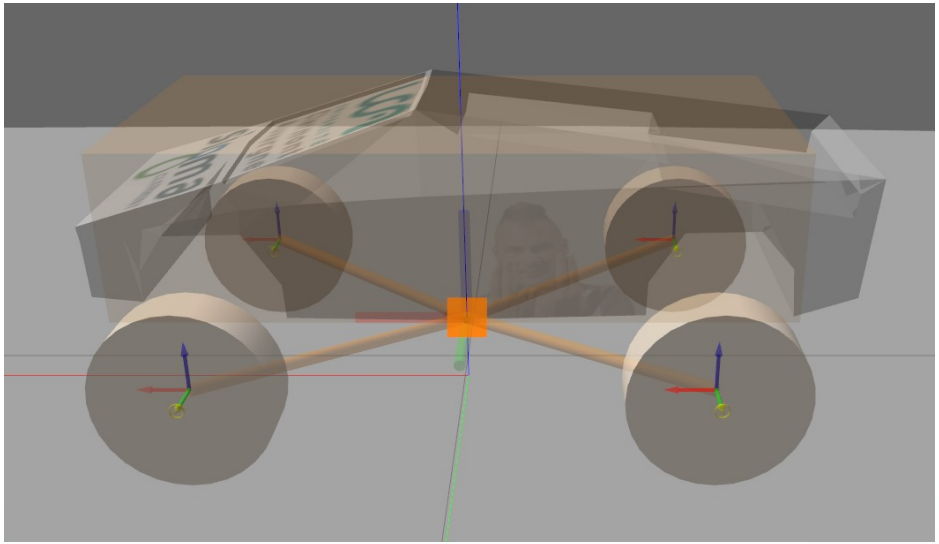
Car and road





Car collision

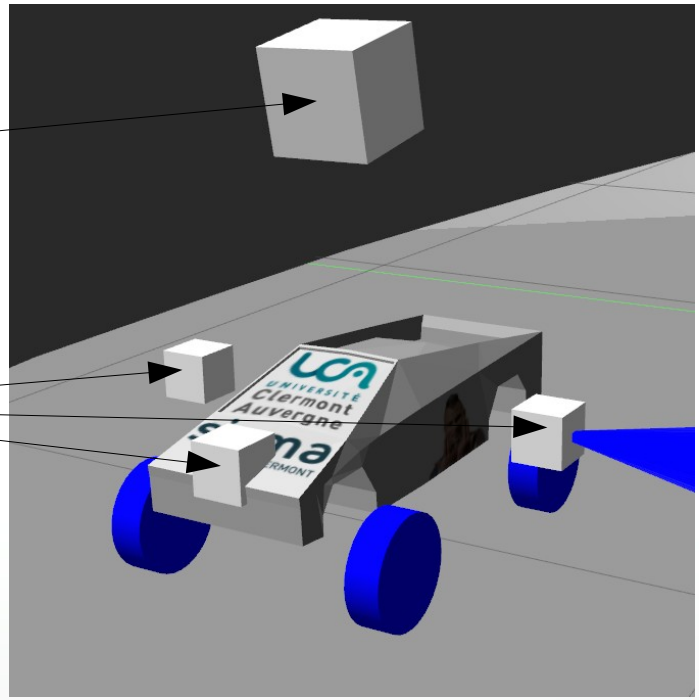




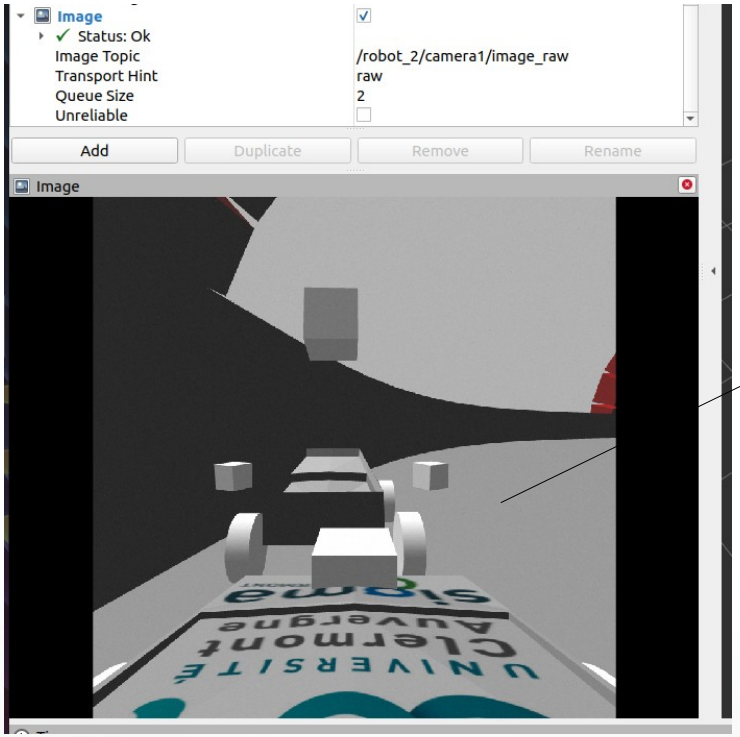
Car’s sensors

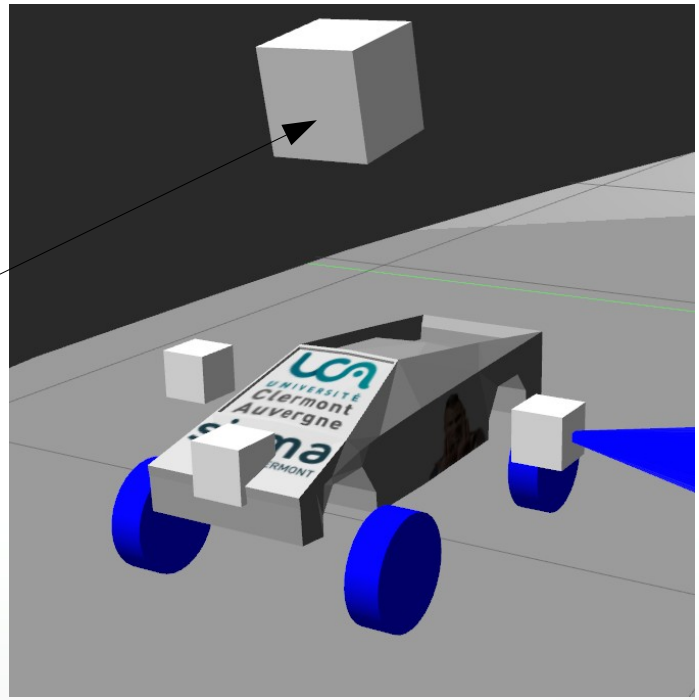
Camera

Range sensor

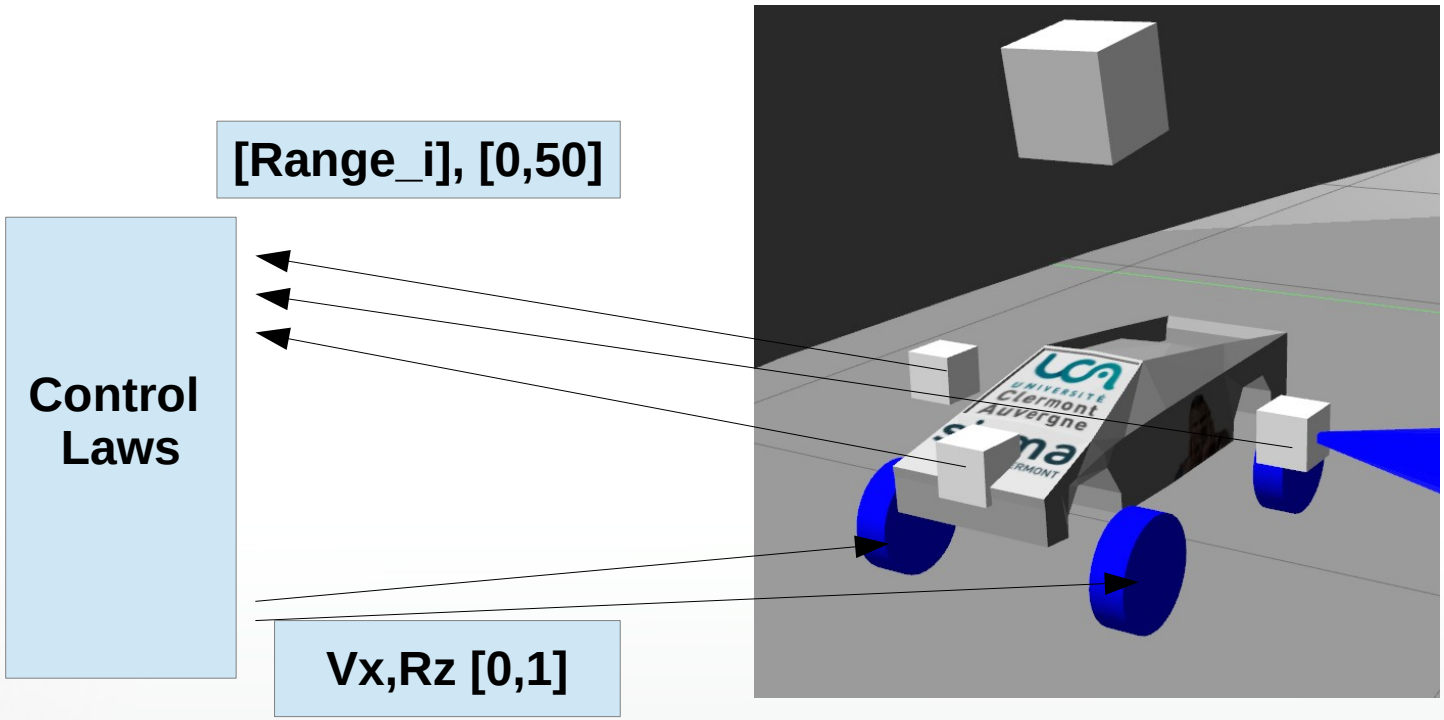


Car’s sensors

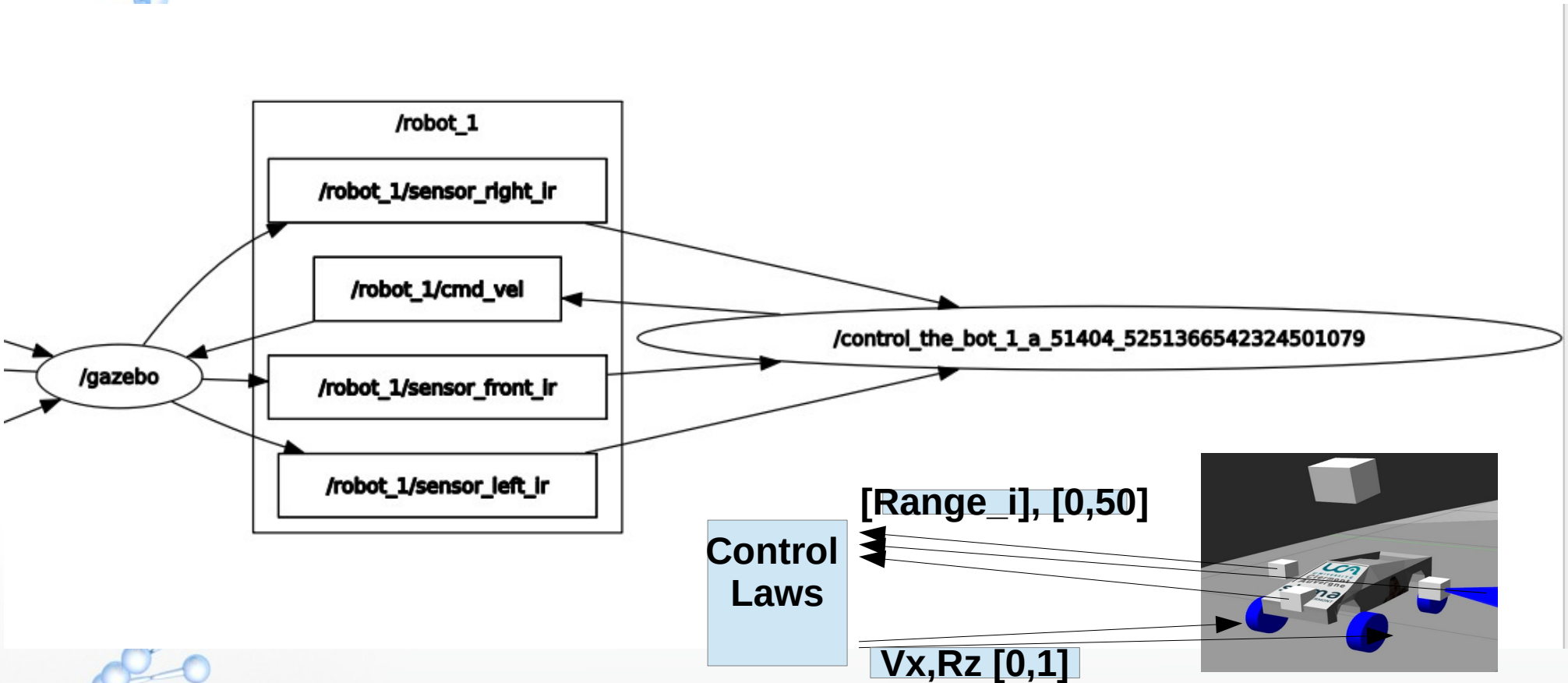




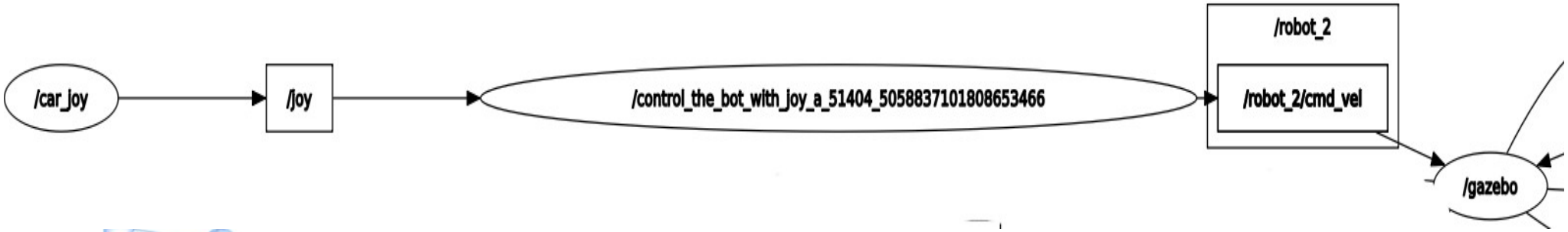
Car control



Car control

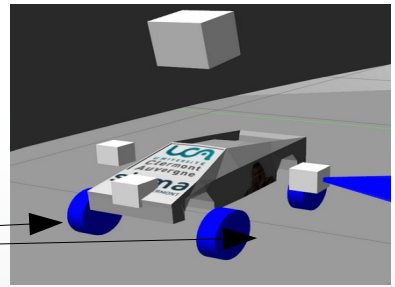

/robot_1
/robot_1/sensor_right_ir
/robot_1/cmd_vel
/robot_1/sensor_front_ir
/robot_1/sensor_left_ir
/gazebo
/control_the_bot_1_a_51404_5251366542324501079
Control Laws
[Range_i], [0,50]
Vx,Rz [0,1]

Car control



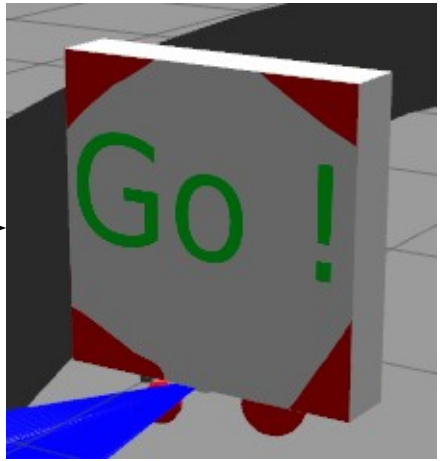
Joy control

Vx,Rz [0,1]



Control panel

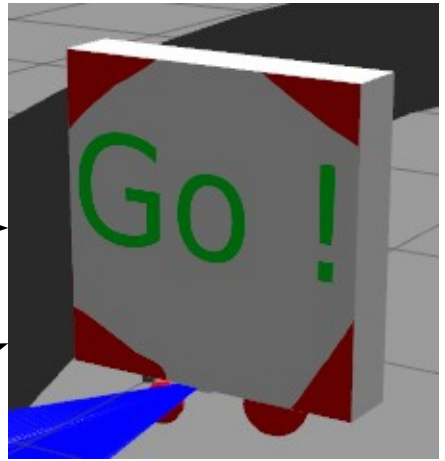
Start the race



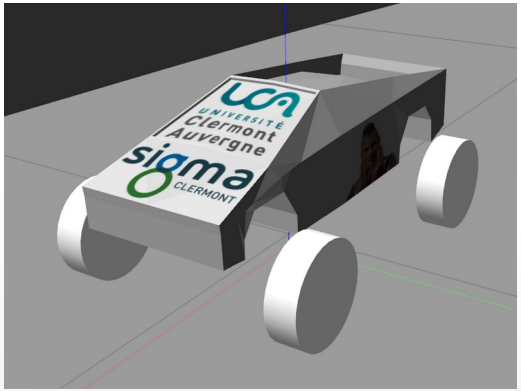
Detect the winner

Control panel

Start the race

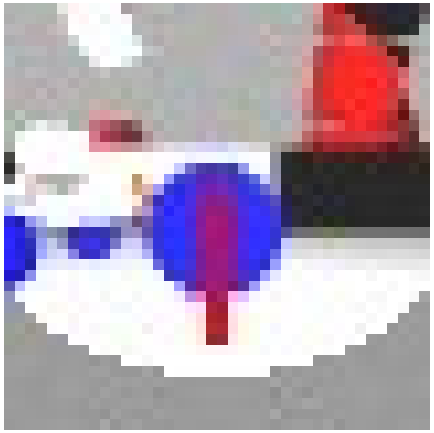


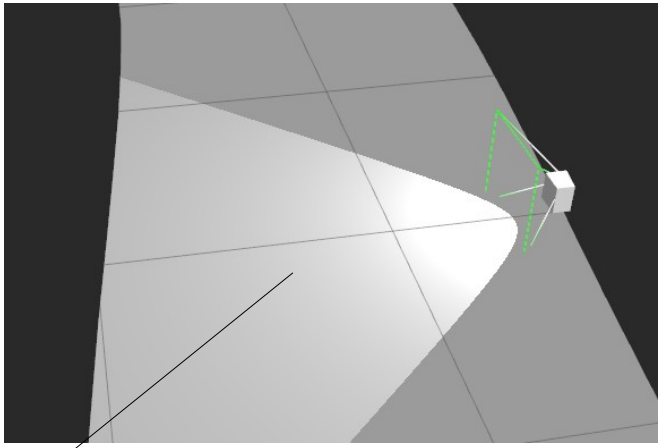
Start ?



True / False

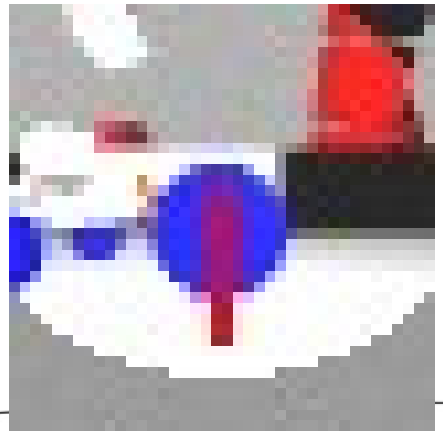
Control panel

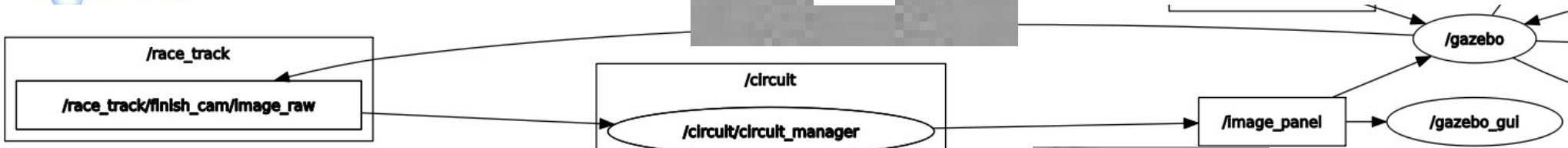




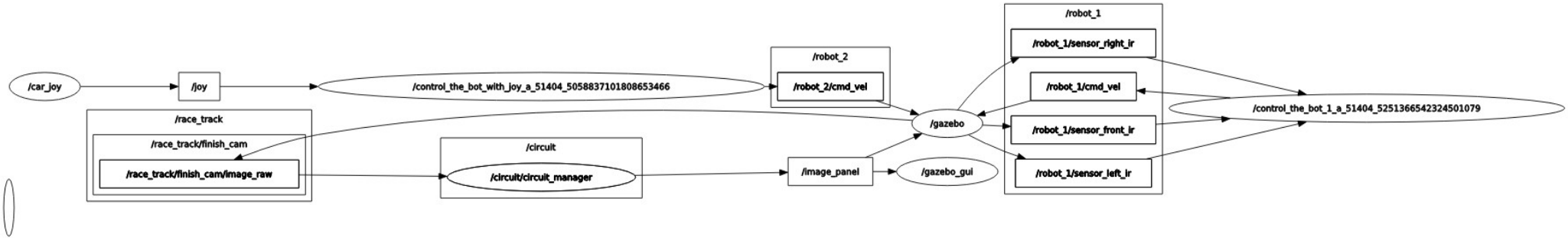
Detect the winner

Control panel

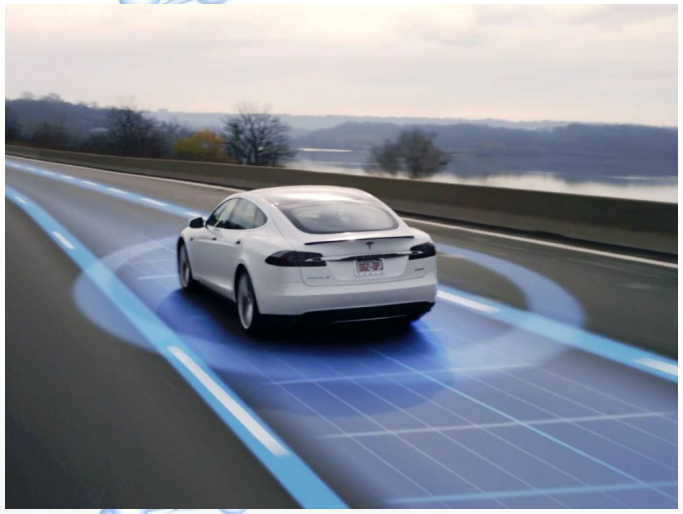




Final rqt graph



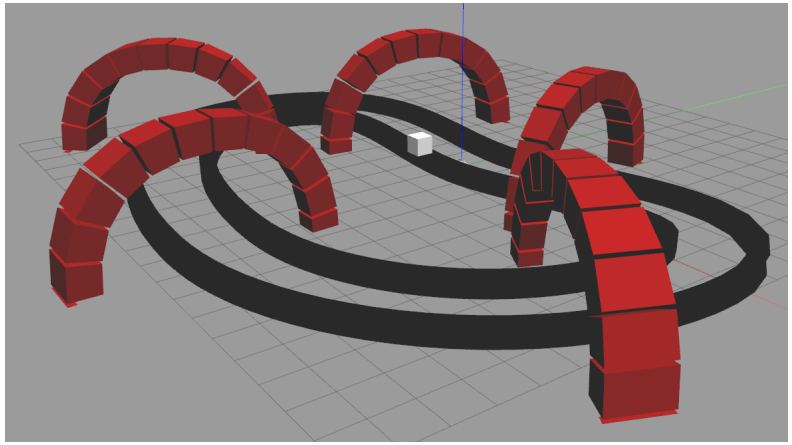
Conclusion



Questions ?

sigma CLERMONT

UNIVERSITÉ Clermont Auvergne



CHUPIN Clément

GUIGES Enzo