

## carla 里面方向盘左正右负

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## PID & Foxy 启动流程

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1. `cd /carla-ros-bridge`
2. `source source_env.sh`
3. `colcon build`
4. `source source_env.sh`
5. `ros2 launch carla_shenlan_bridge_ego_vis carla_bridge_ego_vehilce.launch.py`
6. 在新的终端里面: `ros2 run carla_shenlan_pid_controller carla_shenlan_pid_controller_node`

## Stanley & Foxy 需要完成的内容

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1. `src/ros-bridge/carla_shenlan_projects/carla_shenlan_stanley_pid_controller/src/stanley_controller.cpp` 中的 TODO 部分

## Stanley & Foxy 启动流程

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1. `cd /carla-ros-bridge`
2. `source source_env.sh`
3. `colcon build`
4. `source source_env.sh`
5. `ros2 launch carla_shenlan_bridge_ego_vis carla_bridge_ego_vehilce.launch.py`
6. 在新的终端里面: `ros2 run carla_shenlan_stanley_pid_controller carla_shenlan_stanley_pid_controller_node`

## LQR & Foxy 需要完成的内容

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1. `carla-ros-bridge/src/ros-bridge/carla_shenlan_projects/carla_shenlan_lqr_pid_controller/src/lqr_controller.cpp` 中的 TODO 部分

## LQR & Foxy 启动流程

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1. `cd /carla-ros-bridge`
2. `source source_env.sh`
3. `colcon build`
4. `source source_env.sh`
5. `ros2 launch carla_shenlan_bridge_ego_vis carla_bridge_ego_vehilce.launch.py`
6. 在新的终端里面: `ros2 launch carla_shenlan_lqr_pid_controller lqr_launch.py`

## MPC & Foxy 需要完成的内容

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## MPC & Foxy 启动流程

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1. `cd /carla-ros-bridge`
2. `source source_env.sh`
3. `colcon build`
4. `source source_env.sh`
5. `ros2 launch carla_shenlan_bridge_ego_vis carla_bridge_ego_vehilce.launch.py`
6. 在新的终端里面: `ros2 launch carla_shenlan_mpc_controller mpc_launch.py`

## Lattice & Foxy 启动流程

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1. `cd /carla-ros-bridge`
2. `source source_env.sh`
3. `colcon build`
4. `source source_env.sh`
5. `ros2 launch carla_shenlan_bridge_ego_vis carla_bridge_ego_vehilce.launch.py`
6. 在新的终端里面: `ros2 launch carla_shenlan_lattice_planner lattice_launch.py`

## A\* & Foxy 启动流程

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1. `cd /carla-ros-bridge`
2. `source source_env.sh`
3. `colcon build`
4. `source source_env.sh`
5. `ros2 launch carla_shenlan_a_star_planner a_star_planner.launch.py`

## 作业要求

1. `carla-ros-bridge/src/ros-bridge/carla_shenlan_projects/carla_shenlan_a_star_planner/src/Astar_searcher.cpp` 中的 TODO 部分
2. 对比分析不同的启发函数的计算耗时，每次运行后在终端内会打印计算时间，需要截图放入文档中上传。

