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Description

Use the codebase for GPS and waypoints which Hang Cui has kindly let us use (gzipped tarfile) and your skill and judgement to cause the vehicle to follow a figure 8 path on the outdoor track.

Steps

Step 1: Record the figure 8 path

Open the 1st terminal, launch the joystick controller.

```
source devel/setup.bash
roslaunch basic_launch gem_dbw_joystick.launch
```

Open the 2nd terminal, launch the basic sensors.

```
source devel/setup.bash
roslaunch basic_launch gem_sensor_init.launch
```

Open the 3rd terminal and let the safty driver drive the vechicle in a figure 8 path.

```
source devel/setup.bash
rosrun gem_waypoint_pid follow_waypoints.py
```

Step 2: Control the vechicle to follow the figure 8 path automatically

Open the 1st terminal, launch the joystick controller.

```
source devel/setup.bash
roslaunch basic_launch gem_dbw_joystick.launch
```

Open the 2nd terminal, launch the basic sensors.

```
source devel/setup.bash
roslaunch basic_launch gem_sensor_init.launch
```

Open the 3rd terminal and and let the computer controls the vechicle.
Make sure you use the `fig8.csv` as the waypoints source.

```
source devel/setup.bash
rosrun gem_waypoint_pid follow_waypoints.py
```

Video Link

https://youtu.be/pZCcuCtHEs8