

Self Driving

整体概述

- https://zhuanlan.zhihu.com/p/415307584

资料合集

https://zhuanlan.zhihu.com/p/58422485

https://zhuanlan.zhihu.com/p/504375332

很赞的github项目

https://atsushisakai.github.io/PythonRobotics/modules/path_planning/bspline_path/bspline_path.html

https://github.com/daohu527/awesome-self-driving-car

python控制相关的库

Sympy

https://docs.sympy.org/latest/tutorial/index.html#tutorial

Control

https://python-control.readthedocs.io/en/0.9.1/intro.html

规划

- 高飞——运动规划

https://www.bilibili.com/video/BV1Et4y167Ak?spm_id_from=333.1007.top_right_bar_window_custom_collection.content.click
- 机器人路径规划、轨迹优化系列课程

https://www.bilibili.com/video/BV1yT4y1T7Eb?p=2
- https://www.cs.cmu.edu/~motionplanning/lecture/lecture.html
- 很赞的github仓库

https://github.com/zhm-real/PathPlanning

https://github.com/onlytailei/CppRobotics
- https://www.coursera.org/learn/motion-planning-self-driving-cars/home/module/1

决策

- DR_CAN

https://www.bilibili.com/video/BV1RW411q7FD?spm_id_from=333.999.0.0
- LQR

https://blog.csdn.net/qq_24649627/article/details/104690279

https://jonathan-hui.medium.com/rl-lqr-ilqr-linear-quadratic-regulator-a5de5104c750
- Pure pursuit
- MPC

DR_CAN

https://www.bilibili.com/video/BV1cL411n7KV?spm_id_from=333.999.0.0

https://blog.csdn.net/weixin_44718107/article/details/123944631#commentBox

Apollo代码学习

https://blog.csdn.net/u013914471/category_8019324.html

http://www.mpc.berkeley.edu/mpc-course-material

http://cse.lab.imtlucca.it/~bemporad/mpc_course.html
- PID
- 忠厚老实的老王

https://space.bilibili.com/287989852/video?tid=0&page=2&keyword=&order=pubdate
- 小黎的Ally

https://space.bilibili.com/477041559/channel/seriesdetail?sid=863037&ctype=0
- 很赞的github仓库

https://github.com/zhm-real/MotionPlanning

https://github.com/Shunichi09/PythonLinearNonlinearControl
- learning

Self-driving cars with Carla and Python

https://www.youtube.com/watch?v=J1F32aVSYaU
- 行为决策建模

MDP

POMDP

*预测

- 卡尔曼滤波

线性卡尔曼

扩展卡尔曼

无迹卡尔曼
- https://github.com/rlabbe/Kalman-and-Bayesian-Filters-in-Python

无人车模型

- 运动学
- 动力学

自动驾驶仿真环境

- Highway-env

https://highway-env.readthedocs.io/en/latest/environments/highway.html

https://github.com/eleurent/highway-env
- Udacity's Self-Driving Car Simulator

https://github.com/udacity/self-driving-car-sim

DL

https://www.leiphone.com/category/transportation/RuoKaDSTmd1dCIUV.html

https://www.zybuluo.com/Pigmon/note/902580

Term 2 Simulator

https://github.com/udacity/self-driving-car-sim/releases

self-driving-car project

https://github.com/ndrplz/self-driving-car
- Car_demo——ROS-GAZEBO

https://github.com/osrf/car_demo
- Carla

https://github.com/carla-simulator/carla

https://www.zhihu.com/people/xie-xiao-fei-78-24/posts

常用的优化求解器

- OSQP

编程

- C++
- python

百度Apollo

- EM Planner
- Lattice Planner
- Apollo平台学习

https://blog.csdn.net/Travis_X

cyberRT

https://github.com/daohu527/Dig-into-Apollo