

Autonomous Driving Unit, BYD Ltd.

# Research Overview

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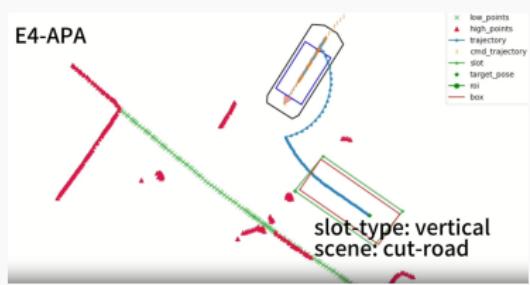
- ▶ 2023.09 - present **Motion Planning Engineer**  
Autonomous Driving Unit, BYD Ltd.
- ▶ 2022.11 - 2023.03 **Planning Algorithm Intern**  
Momenta Tech Ltd.
- ▶ 2021.09 - 2023.07 **M.E. in Control Engineering**  
Harbin Institute of Technology
- ▶ 2017.09 - 2021.07 **B.E. in Automation**  
Dalian Maritime University

# Research

Autonomous Driving Unit, BYD Ltd.



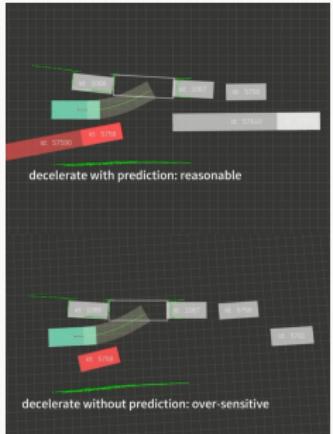
As a Motion Planning Engineer at BYD Ltd. in the Autonomous Driving Unit, I am developing the E4APA Parking Assistance system for 4WD vehicles.



E4APA beat human driver at BYD Tech Open Day.  
Click every picture to the related video website.



- ▶ Develop path planner for 4WD vehicles (E4 Platform), which have ROTATION gear
- ▶ Develop framework of parking task, include preplan/env/decider/predict/etc.
- ▶ Optimize prediction and nudging strategy for dynamic obstacles
- ▶ Design a multi-thread planning framework to fix functional safety risks
- ▶ Make developing and testing tools with python/ros/ros2/gtest/QT/etc.





I am applying an open-source frame using osqp-eigen to an AVP research that has not yet been published.





I participated in the Highway Navigation Pilot Project.

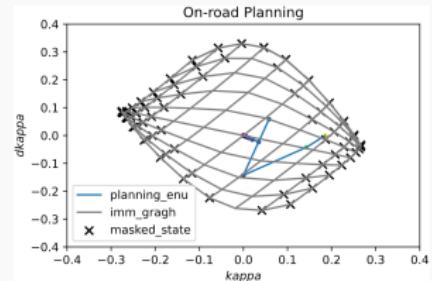
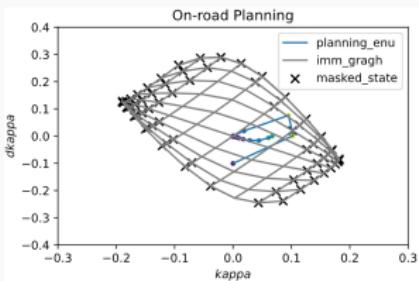
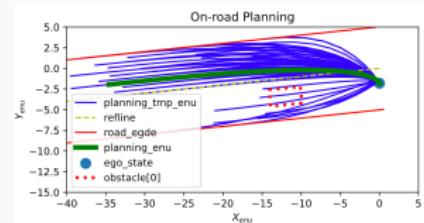
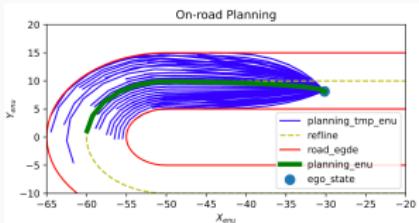
- ▶ Implement CiLQR path optimizer
- ▶ Optimize crossroad and ramp processing



HNP has been delivered to BYD and other car company.



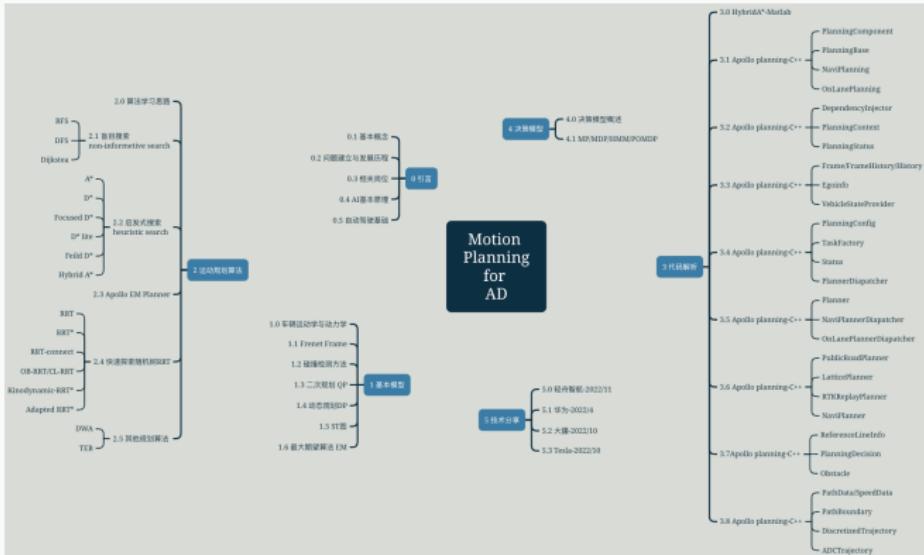
My Master's thesis is about motion planning with Milliken Dynamic Model



Click on here to the thesis



I wrote a tech blog for motion planning, which has 300+ stars.



Click on here to the thesis



I won a national award at the NXP Cup Intelligent Car Race in 2019, where I started my interest in robot.

