Meeting Notes 03.03.2022

Attendance ✅❌:

Name	abbr	attendance
Marco	forstma1	✅
Dan	hochsdan	✅
Luis	miranlui	✅
Monika	reif	❌
Stefan	brrt	❌

Notes

- Both Marco and Dan have completed the official ROS 2 tutorials
- Both have done some research into existing path planning algorithms and other works
    - Basic graph search algorithms
        - Dijkstra
        - A*
    - Rapidly-exploring Random Trees (RRT)
    - Model Predictive Path Integral (MPPI)
- Some interesting papers have been uploaded to the FSZHAW SharePoint
  https://zhaw.sharepoint.com/sites/FSZHAW2020-2021
- Next big step is to define the interfaces for both the inputs and outputs
    - Output will very likely be the next coordinate for the car to go to (probably the easiest and most preferable solution)
        - Still some restrictions apply
            - Distance of the car to the next point (e.g. 2m in front of the car) <- most likely be a config parameter
    - Input will probably be a list of the coordinates of the detected cones and the current position of the car (will be most tricky part)
- Need to think about what to implement and how to organize the nodes internally in ROS
- Resource Mgmt also important, computation needs to be quick of the path
- If we already want to implement something in ROS -> Draw a middle line of the path

TODOs

- Think about the Input and Output
- Think about the architecture and how we want to organize the nodes internally

- First implementation in ROS possible -> draw a middle line