



## February 19 - 25 Weekly Report

### 1 Progress

- Lane detection tests were conducted with different disturbances on different locations of the path. Possible detection errors were again analysed. An example case can be seen at *Figure 1*.



Figure 1: Possible Problems on the Path - 1.

- The chassis parts were drawn in Solidworks. And the placements of the components on top of the chassis were discussed. The main components can be seen from the *Figure 2*. The mounting bracket for the motor can be seen at *Figure 3*.
- Initial consideration on system modelling via Bump Test were discussed. A simulink model was drawn for the expected overdamped system with pure delay. The model can be seen from the *Figure 4*.



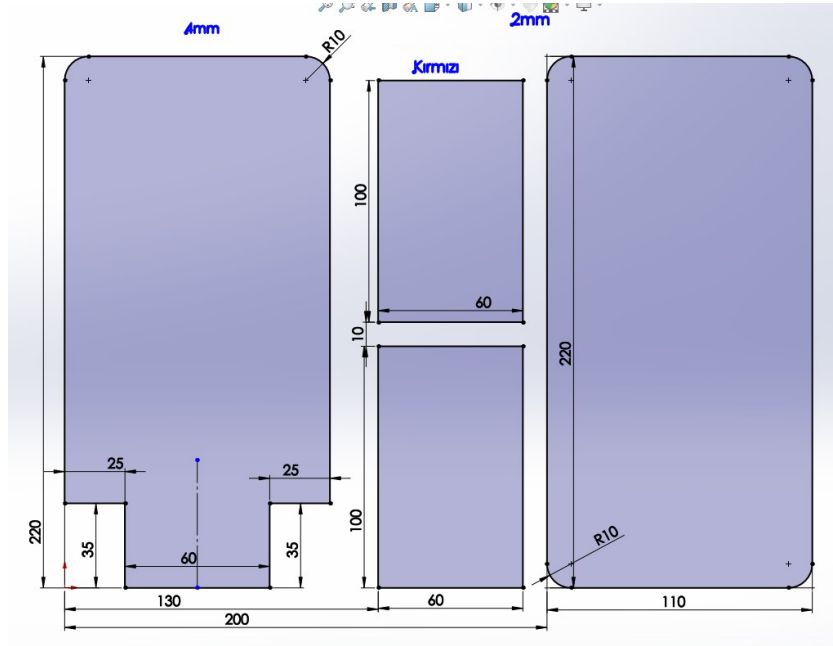


Figure 2: Main Components of the Chassis

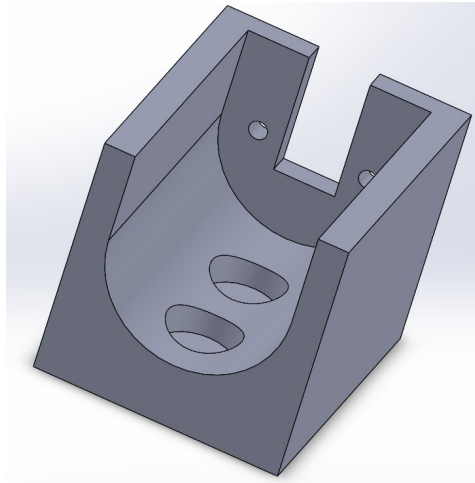


Figure 3: Mounting Bracket for the Motor



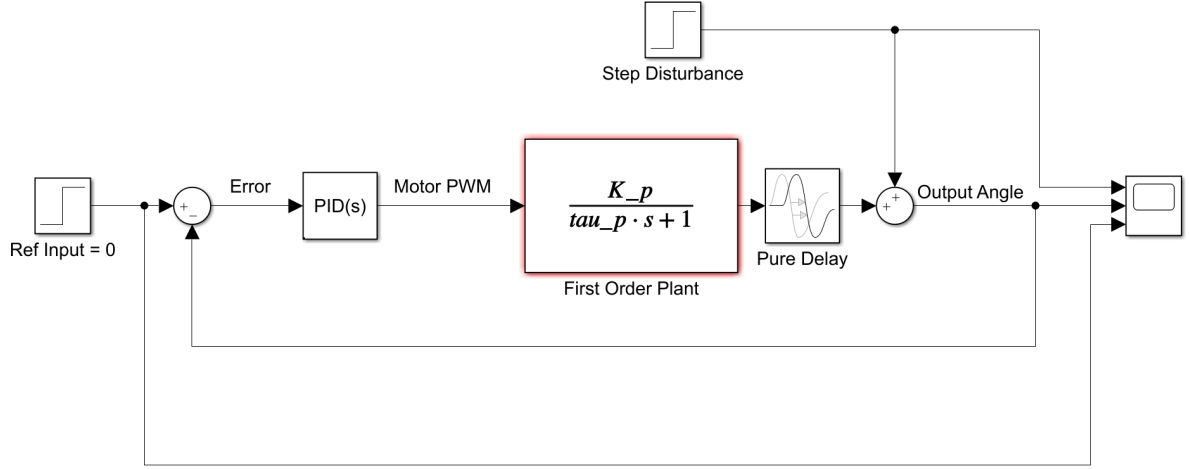


Figure 4: A Simulink Model for the Expected Overdamped System

## 2 Plans

- New chassis will be built.
- Initial attempts to tune PID controller for the lateral movement of the vehicle.

## 3 Problems

- The method for getting step response step response. Two alternatives can be seen from *Figures ?? & 6*.

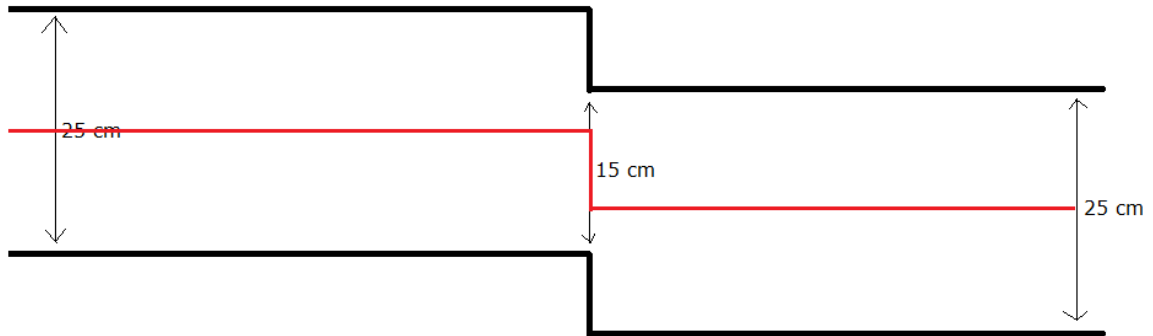


Figure 5: A Bump Test Set-Up for Distance Control System



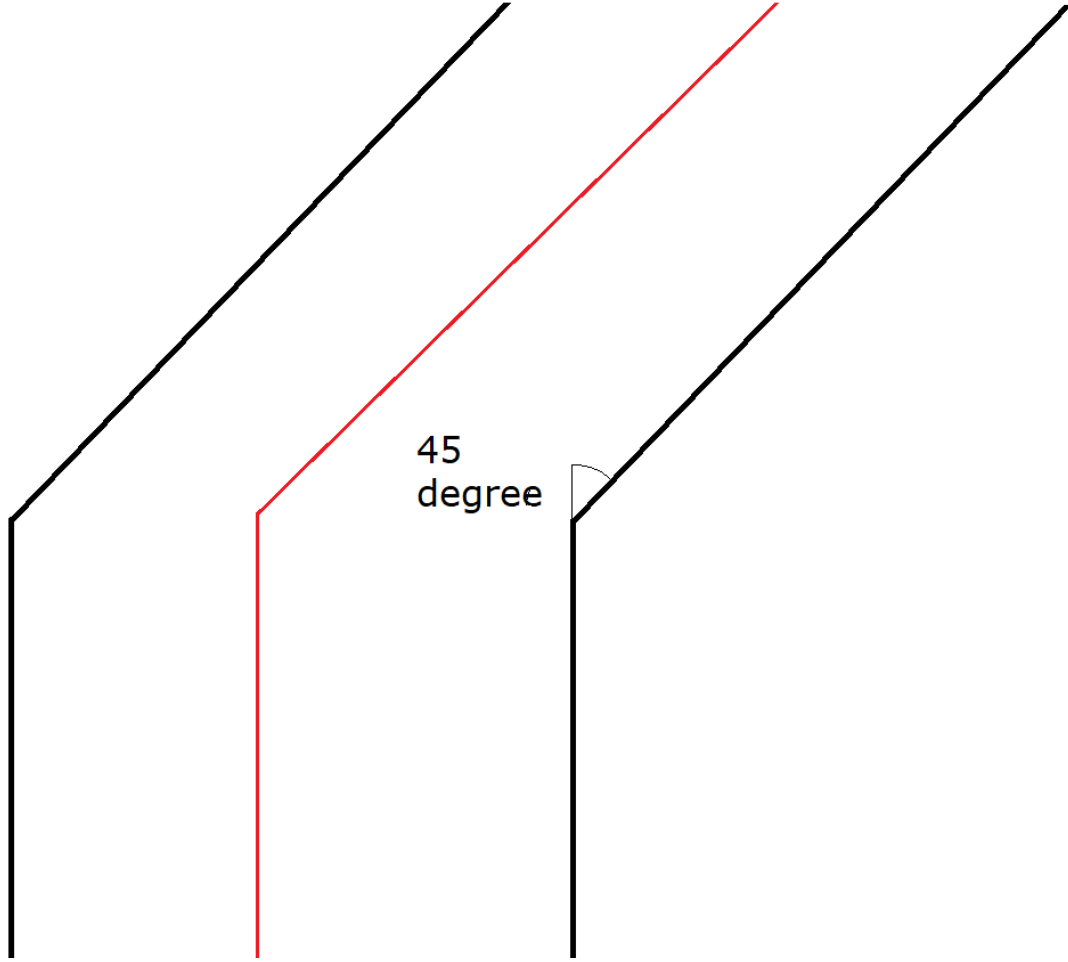


Figure 6: A Bump Test Set-Up for Angle Control System

