Duayenler Ltd. Şti.
Members :
Enes Taştan,   2068989, 0543 683 4336
Halil Temurtaş, 2094522, 0531 632 2194

March 26, 2019
Sarper Sertel, 2094449, 0542 515 6039
Erdem Tuna, 2167419, 0535 256 3320
İlker Sağlık, 2094423, 0541 722 9573

March 19 - March 25 Weekly Report

1 Progress

- A pair of new DC motors were purchased and assembled to the chassis. New driving tests with these motors were done.

- Some problems in lane detection algorithm were noticed. The color filtering collapses when blue color is present in the image. The reason couldn't be resolved yet. We are consulting to Stackoverflow community. Possible solutions were discussed.

- Initial attempts to control the longitudinal speed with lane angle information were attempted.

- Attempts to model the plant further continued, experimental step responses can be seen at *Figure 1* and a step response for a possible closed loop model found by systemIdentification toolbox can be see at *Figure 2*.

- Migration off python code of handshake protocol to C++ was started.

2 Plans

- Further PID controller design parameter tuning for controller subsystem with varying base speed (with Speed Subsystem).

- Improvements in Lane detection algorithm will be done.

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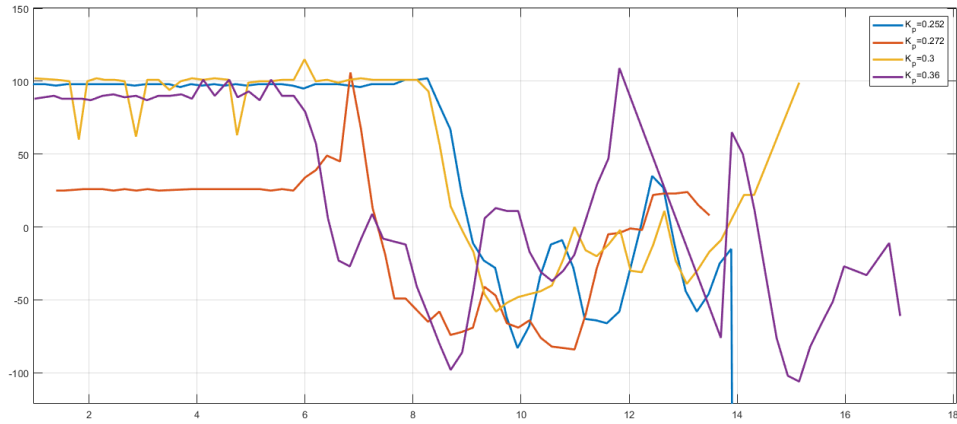İlker Sağlık, 2094423, 0541 722 9573

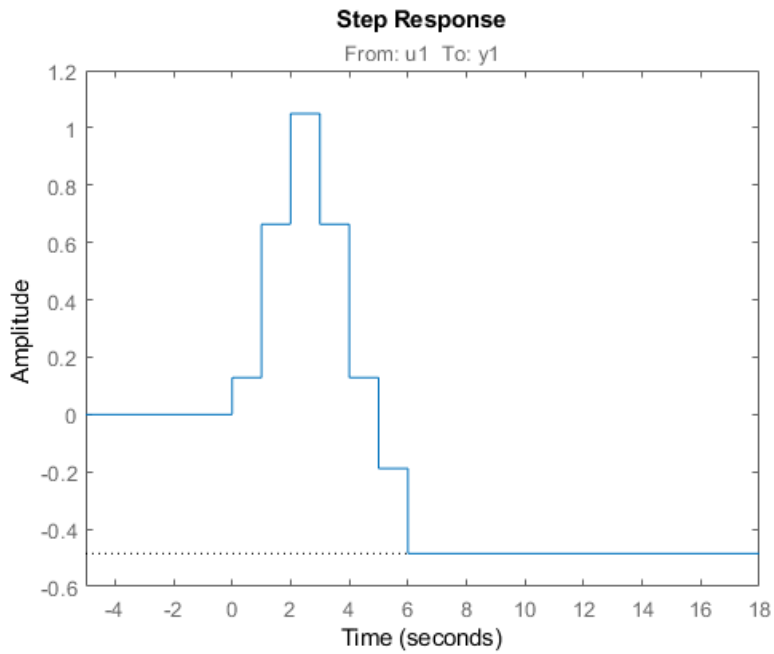Figure 1: Experimental Step Responses with P-Controller

Figure 2: A Step Response for a Possible Discrete Time Closed Loop System Model