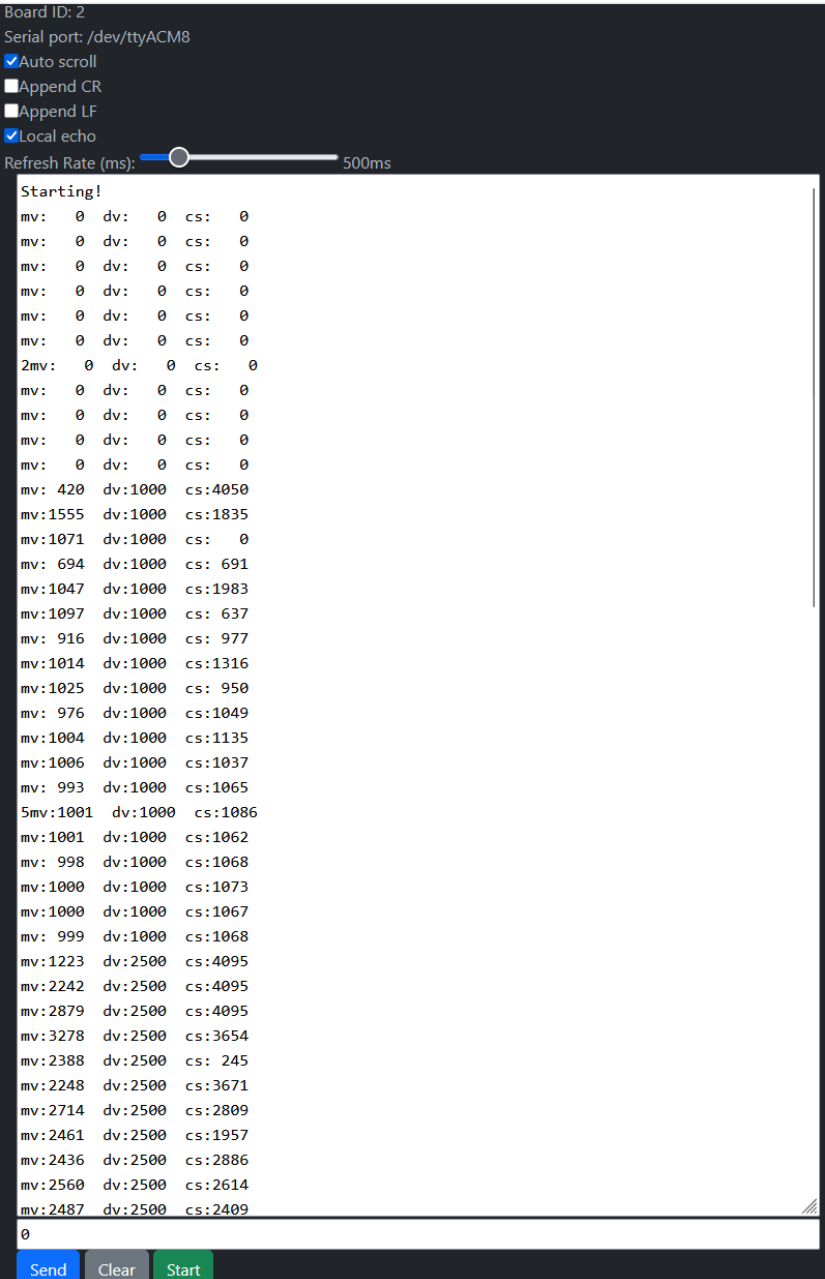


# Advanced Robot Control — PID Control

Michał Trela 259312

June 3, 2025

## 1 Task 1



The screenshot shows a serial terminal interface with a dark background. At the top, it displays 'Board ID: 2' and 'Serial port: /dev/ttyACM8'. Below this are four checkboxes: 'Auto scroll' (checked), 'Append CR' (unchecked), 'Append LF' (unchecked), and 'Local echo' (checked). A 'Refresh Rate (ms):' slider is set to 500ms. The main area shows a list of data points in the format 'mv: [value] dv: [value] cs: [value]'. The data starts with 'Starting!' followed by several rows of zeros. Then, it shows a transition to non-zero values, with 'dv' and 'cs' values increasing in steps. The final line shows '0'.

```
Board ID: 2
Serial port: /dev/ttyACM8
☒ Auto scroll
☐ Append CR
☐ Append LF
☒ Local echo
Refresh Rate (ms):  500ms

Starting!
mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
2mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
mv: 0 dv: 0 cs: 0
mv: 420 dv:1000 cs:4050
mv:1555 dv:1000 cs:1835
mv:1071 dv:1000 cs: 0
mv: 694 dv:1000 cs: 691
mv:1047 dv:1000 cs:1983
mv:1097 dv:1000 cs: 637
mv: 916 dv:1000 cs: 977
mv:1014 dv:1000 cs:1316
mv:1025 dv:1000 cs: 950
mv: 976 dv:1000 cs:1049
mv:1004 dv:1000 cs:1135
mv:1006 dv:1000 cs:1037
mv: 993 dv:1000 cs:1065
5mv:1001 dv:1000 cs:1086
mv:1001 dv:1000 cs:1062
mv: 998 dv:1000 cs:1068
mv:1000 dv:1000 cs:1073
mv:1000 dv:1000 cs:1067
mv: 999 dv:1000 cs:1068
mv:1223 dv:2500 cs:4095
mv:2242 dv:2500 cs:4095
mv:2879 dv:2500 cs:4095
mv:3278 dv:2500 cs:3654
mv:2388 dv:2500 cs: 245
mv:2248 dv:2500 cs:3671
mv:2714 dv:2500 cs:2809
mv:2461 dv:2500 cs:1957
mv:2436 dv:2500 cs:2886
mv:2560 dv:2500 cs:2614
mv:2487 dv:2500 cs:2409
0
```

Figure 1: Serial Output 1

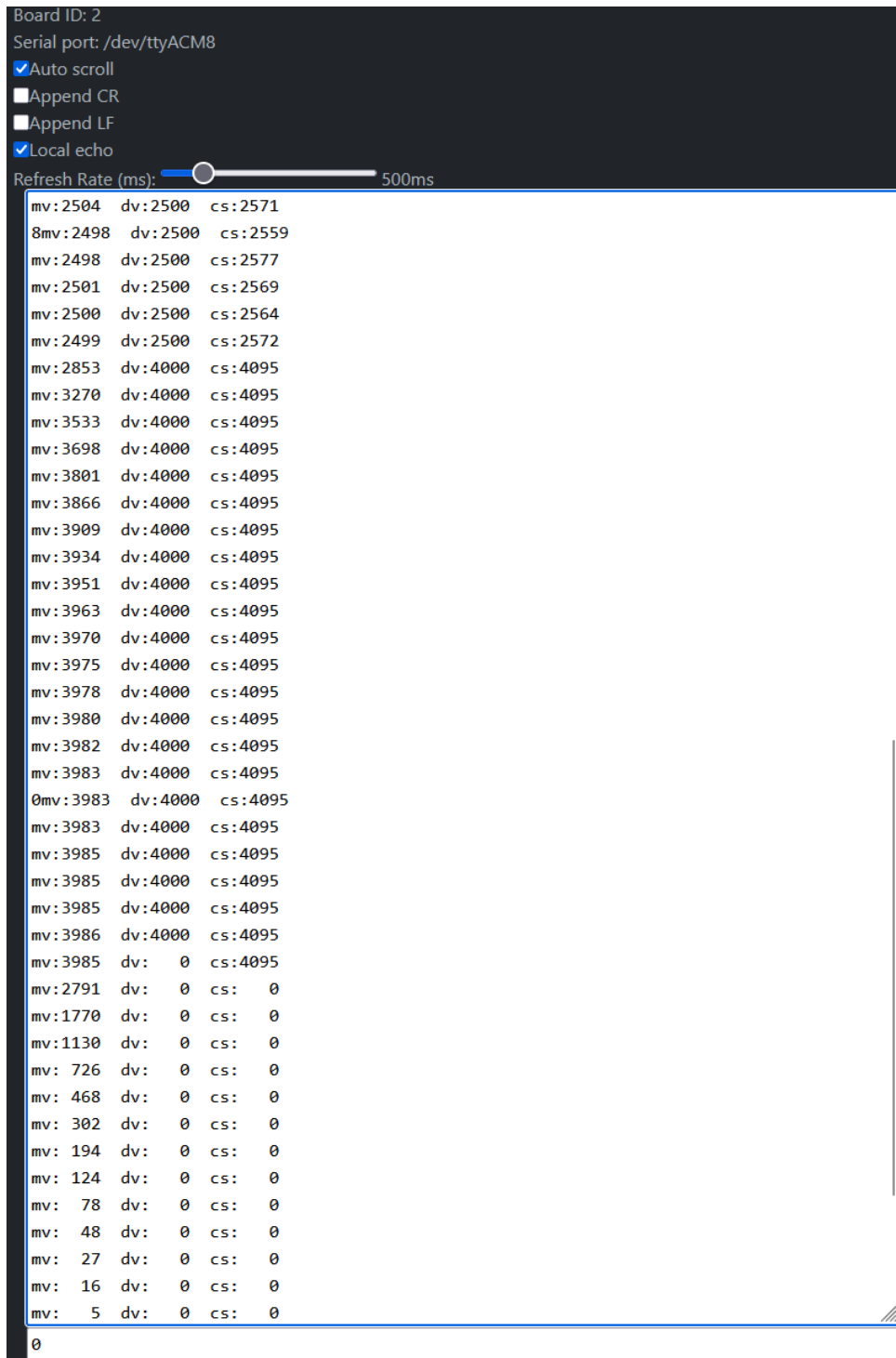


Figure 2: Serial Output 1