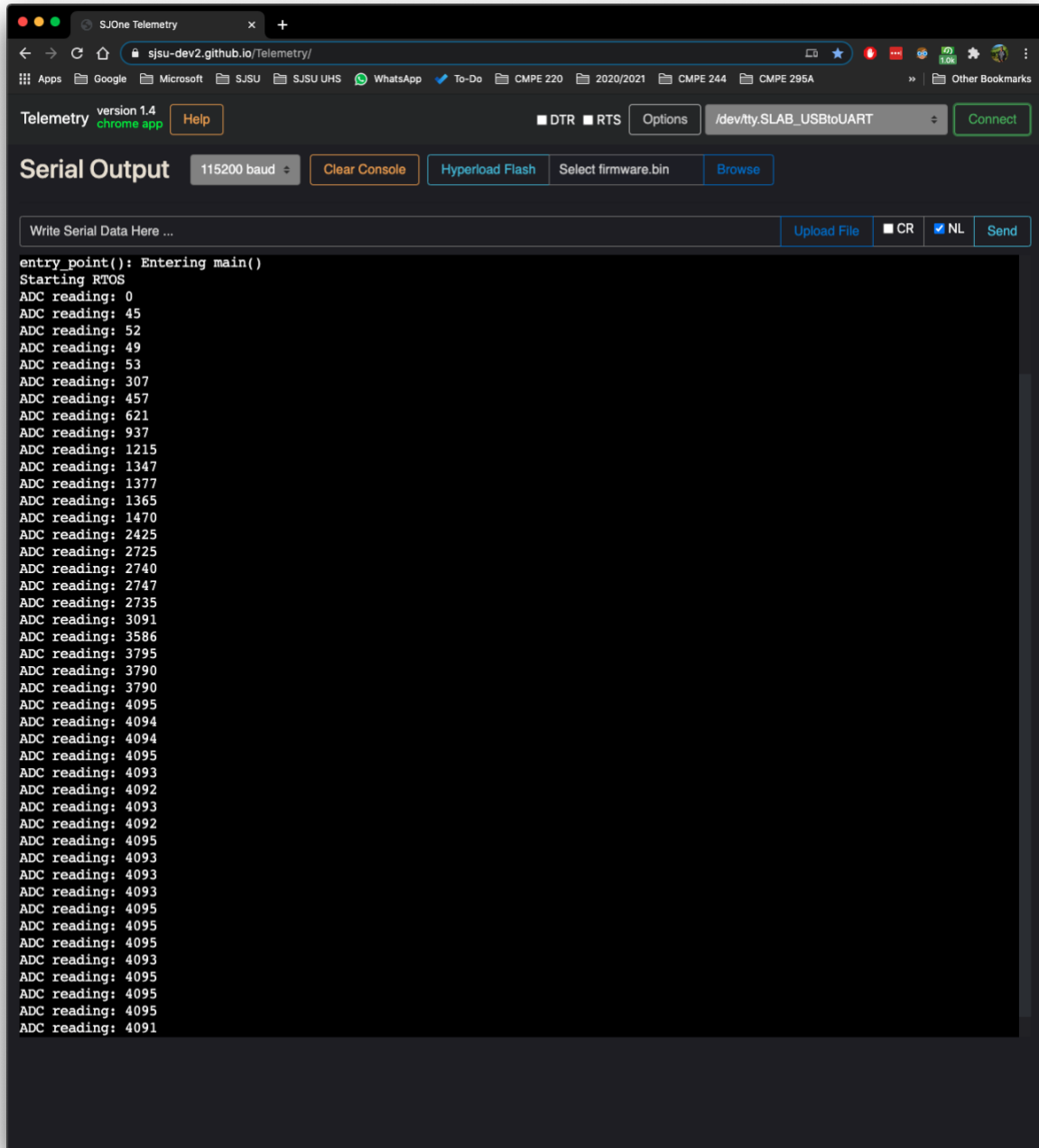


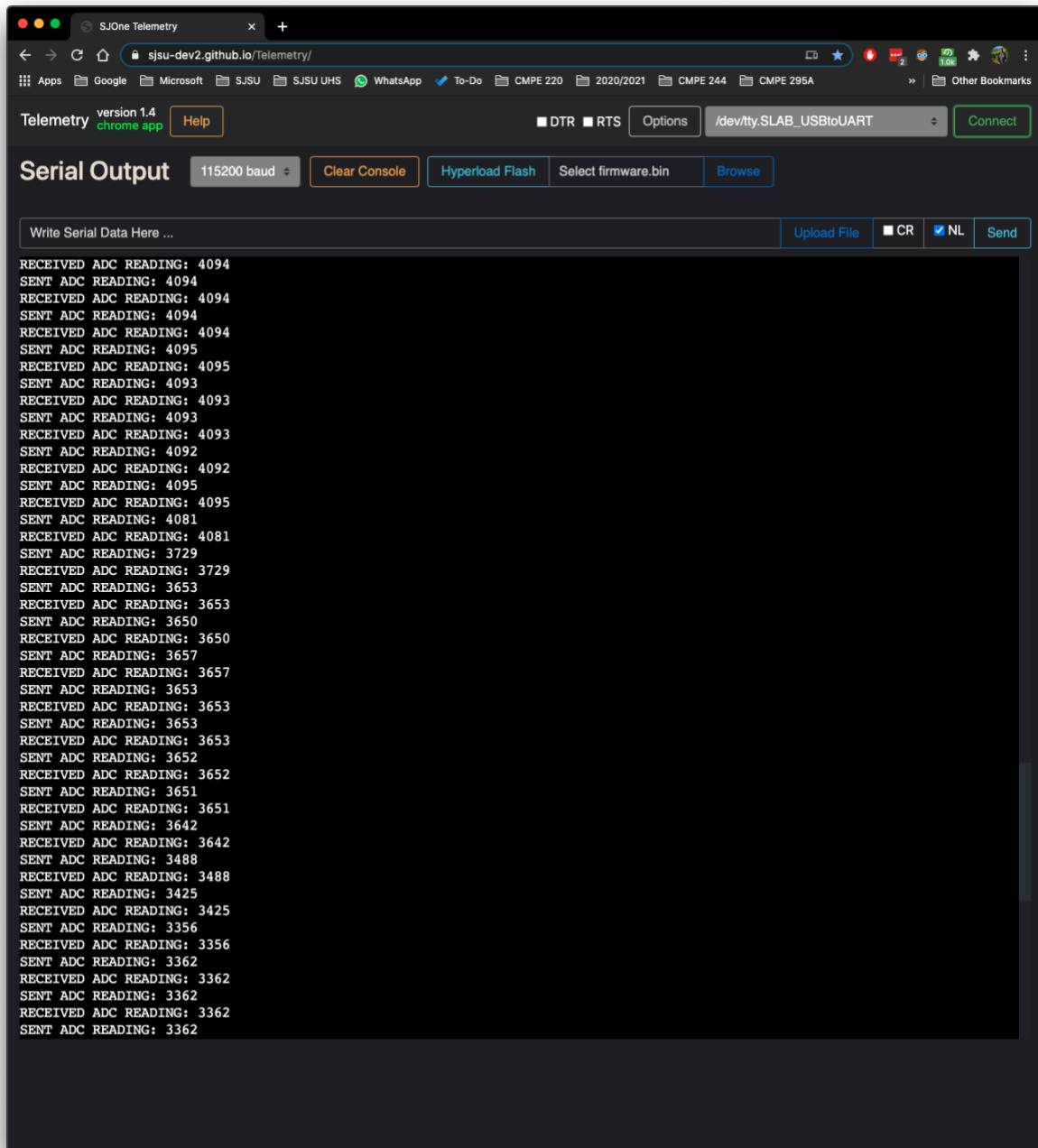
LAB: ADC and PWM

PART 1



LAB: ADC and PWM

PART 2

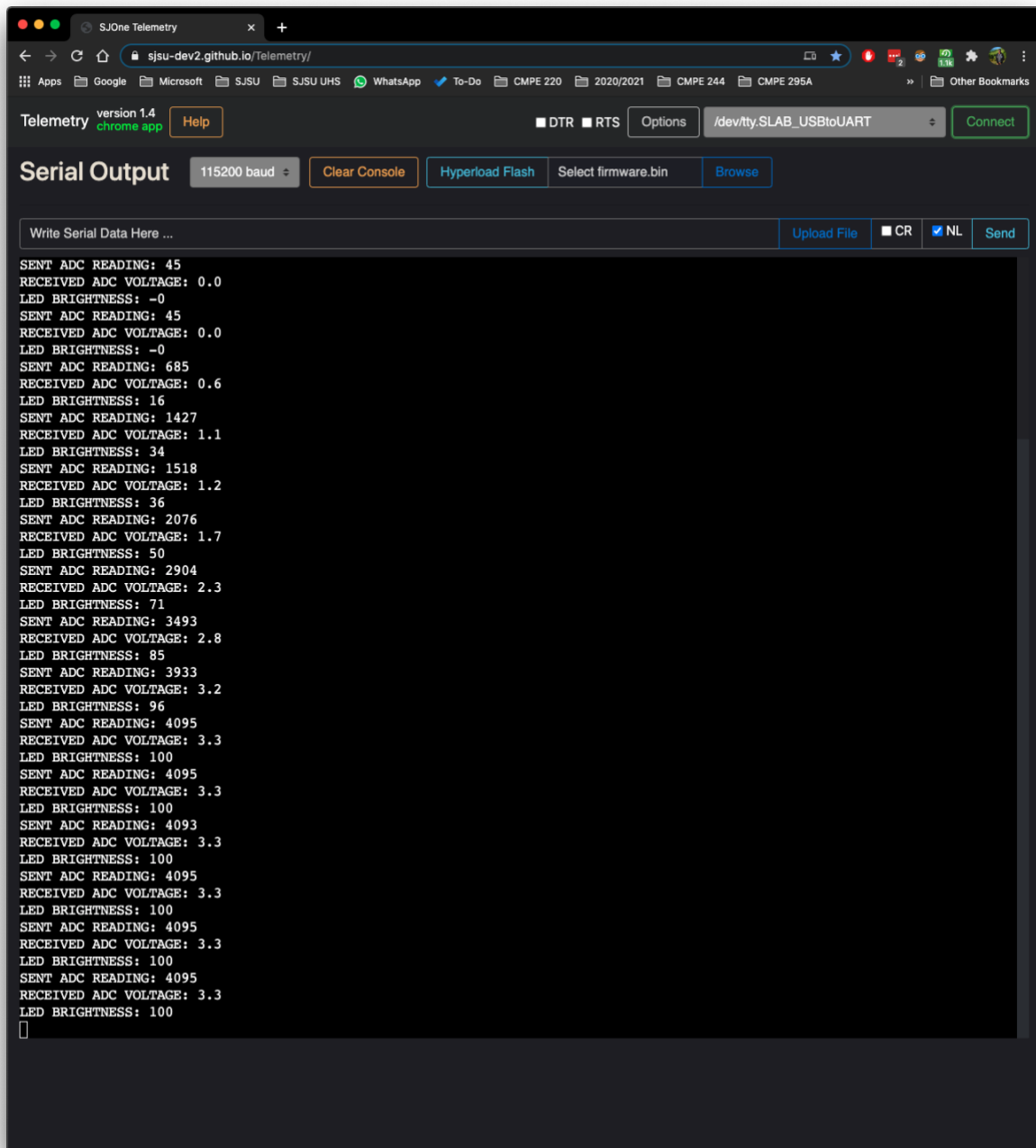


The screenshot shows the SJOne Telemetry web interface in a browser. The page title is "Telemetry version 1.4 chrome app". The URL bar shows "sjsu-dev2.github.io/Telemetry/". The interface includes a "Help" button, a "DTR" button, an "RTS" button, an "Options" button, a dropdown menu showing "/dev/tty.SLAB_USBtoUART", and a "Connect" button. Below these is a "Serial Output" section with a baud rate of "115200 baud", a "Clear Console" button, a "Hyperload Flash" button, a "Select firmware.bin" button, and a "Browse" button. A text input field "Write Serial Data Here ..." is followed by "Upload File", "CR", "NL", and "Send" buttons. The main area displays a log of ADC readings, alternating between "RECEIVED" and "SENT" messages.

```
RECEIVED ADC READING: 4094
SENT ADC READING: 4094
RECEIVED ADC READING: 4094
SENT ADC READING: 4094
RECEIVED ADC READING: 4094
SENT ADC READING: 4095
RECEIVED ADC READING: 4095
SENT ADC READING: 4093
RECEIVED ADC READING: 4093
SENT ADC READING: 4093
RECEIVED ADC READING: 4092
SENT ADC READING: 4092
RECEIVED ADC READING: 4095
SENT ADC READING: 4081
RECEIVED ADC READING: 4081
SENT ADC READING: 3729
RECEIVED ADC READING: 3729
SENT ADC READING: 3653
RECEIVED ADC READING: 3653
SENT ADC READING: 3650
RECEIVED ADC READING: 3650
SENT ADC READING: 3657
RECEIVED ADC READING: 3657
SENT ADC READING: 3653
RECEIVED ADC READING: 3653
SENT ADC READING: 3653
RECEIVED ADC READING: 3653
SENT ADC READING: 3652
RECEIVED ADC READING: 3652
SENT ADC READING: 3651
RECEIVED ADC READING: 3651
SENT ADC READING: 3642
RECEIVED ADC READING: 3642
SENT ADC READING: 3488
RECEIVED ADC READING: 3488
SENT ADC READING: 3425
RECEIVED ADC READING: 3425
SENT ADC READING: 3356
RECEIVED ADC READING: 3356
SENT ADC READING: 3362
RECEIVED ADC READING: 3362
SENT ADC READING: 3362
RECEIVED ADC READING: 3362
SENT ADC READING: 3362
```

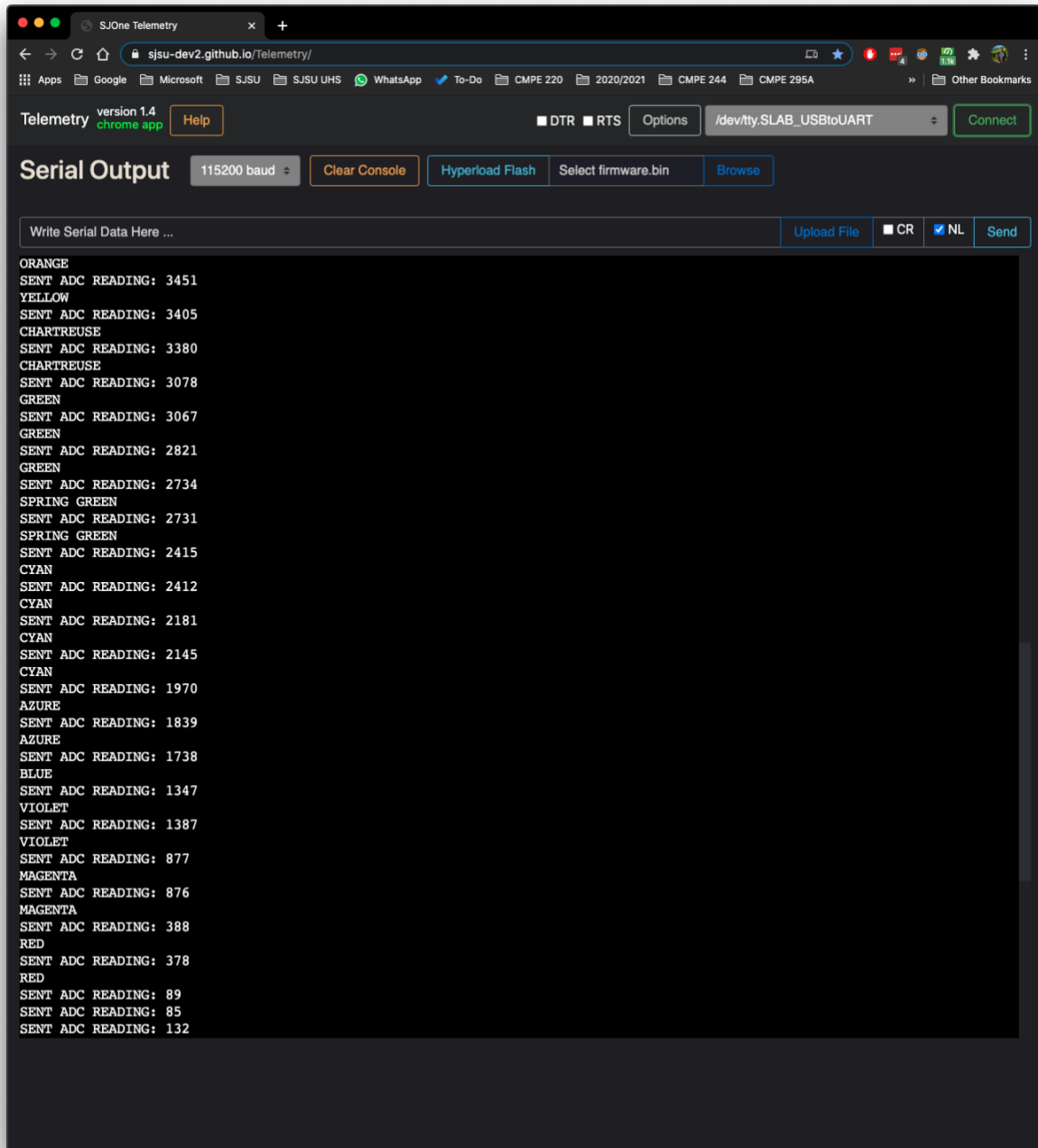
LAB: ADC and PWM

PART 3



LAB: ADC and PWM

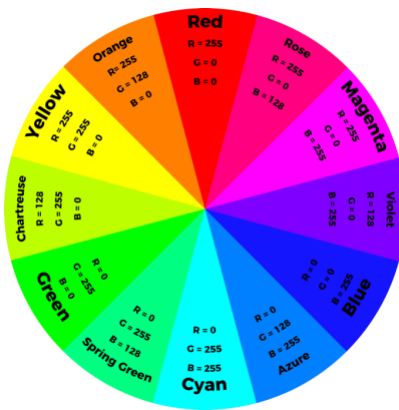
EXTRA CREDIT



The screenshot shows the SJOne Telemetry web interface in a browser. The page title is "Telemetry version 1.4 chrome app". The URL bar shows "sjsu-dev2.github.io/Telemetry/". The interface includes a "Connect" button, a "Serial Output" section with a baud rate of "115200 baud", and a "Clear Console" button. The main area displays a log of serial data. The log shows a sequence of color names followed by "SENT ADC READING:" and a numerical value. The colors cycle through ORANGE, YELLOW, CHARTREUSE, GREEN, SPRING GREEN, CYAN, AZURE, BLUE, VIOLET, MAGENTA, and RED. The ADC readings range from 3451 down to 132.

```
ORANGE
SENT ADC READING: 3451
YELLOW
SENT ADC READING: 3405
CHARTREUSE
SENT ADC READING: 3380
CHARTREUSE
SENT ADC READING: 3078
GREEN
SENT ADC READING: 3067
GREEN
SENT ADC READING: 2821
GREEN
SENT ADC READING: 2734
SPRING GREEN
SENT ADC READING: 2731
SPRING GREEN
SENT ADC READING: 2415
CYAN
SENT ADC READING: 2412
CYAN
SENT ADC READING: 2181
CYAN
SENT ADC READING: 2145
CYAN
SENT ADC READING: 1970
AZURE
SENT ADC READING: 1839
AZURE
SENT ADC READING: 1738
BLUE
SENT ADC READING: 1347
VIOLET
SENT ADC READING: 1387
VIOLET
SENT ADC READING: 877
MAGENTA
SENT ADC READING: 876
MAGENTA
SENT ADC READING: 388
RED
SENT ADC READING: 378
RED
SENT ADC READING: 89
SENT ADC READING: 85
SENT ADC READING: 132
```

LAB: ADC and PWM



For Extra Credit, I have implemented a simple RGB 12-Color Wheel, so when the potentiometer ranges from 0 to 3.3v, the color of LED changes from RED towards CYAN and ends at ORANGE.

Video Link: [GOOGLE DRIVE](#)