Lab 1B assignment

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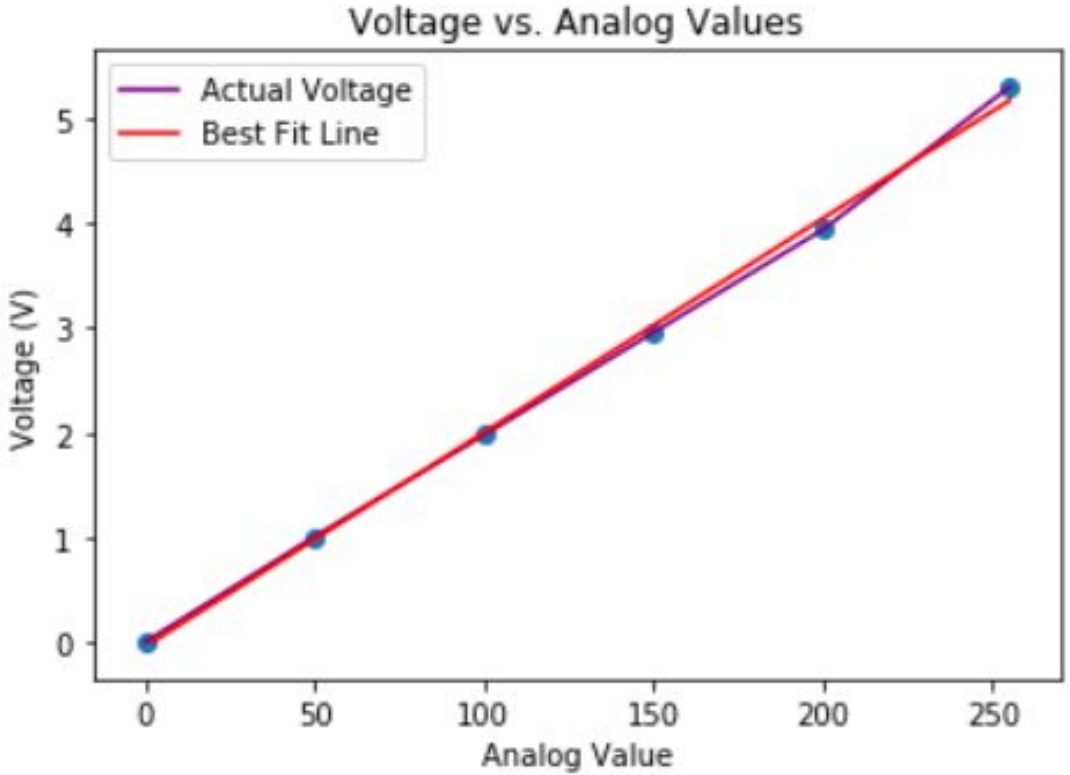
Exercise 1.1: Based on the “results” array, what are the following quantities. Also note down the units

Initial position: 325.2229368 m

Initial velocity: -266.60270034 m/s

Acceleration: 54.50540787 m/s^2

Exercise 1.2: Python plot and fit of LED vs voltage



Exercise 3.1

Fill in the following chart for the reset time (the amount of time needed for the LED to go from its dimmest to the brightest and dimmest again)

fadeAmount (unitless)	delay (milliseconds)	Reset time (seconds)
5	**30**	3.06 s
5	**60**	6.12 s
15	**50**	1.7 s
3.4	100	**15**

Calculations for Slide 4

To calculate the reset time for the first three rows we came up with the formula:

2 * [(255 / fadeAmount) * delay] = Reset time

The value must be doubled because the LED dims, brightens, then dims again.

For the last row, we used the same logic and rearranged the above equation to find the fadeAmount based on the delay that we chose (100 milliseconds).