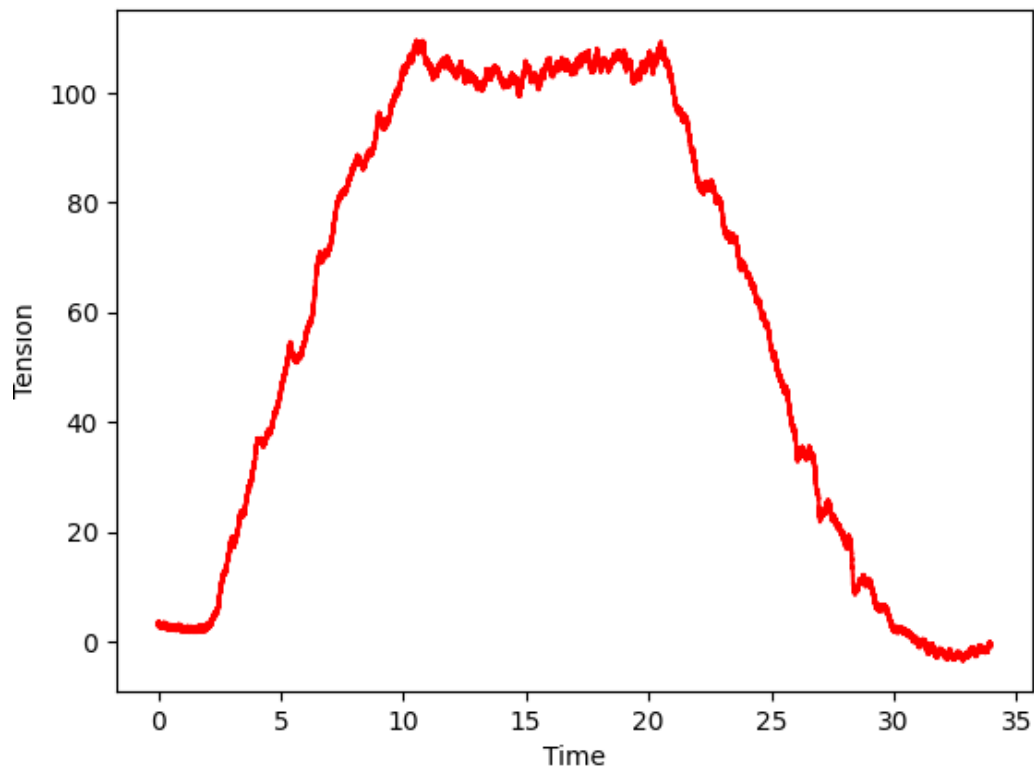
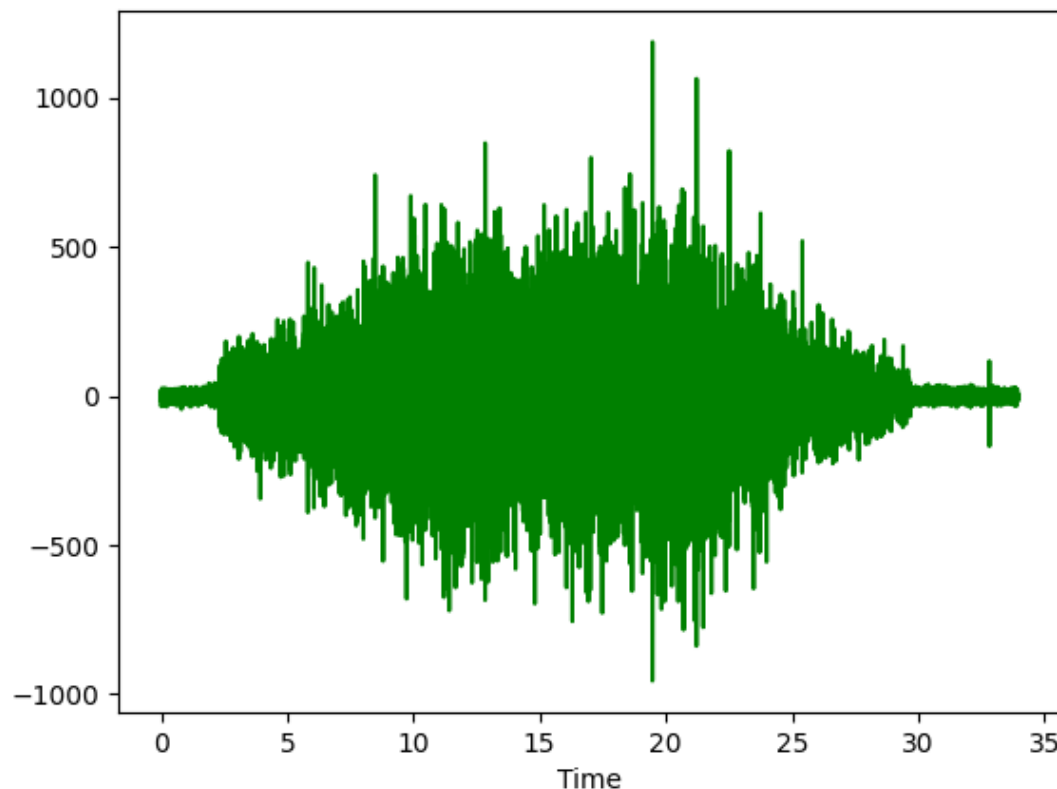


Name: Ezzeldin Ismaeil Ezzeldin



1.1 first plot as seen is the tension or muscle force provided by accumulation of the signal input into the muscle which of course is in state of incomplete tetanus which can be seen as the twitches gets bigger and bigger then stay some time in max state where ca still bonding with trypanin and still in contraction , then state of relaxation follows by lowering in force in some sub-muscles first than others.

1.2

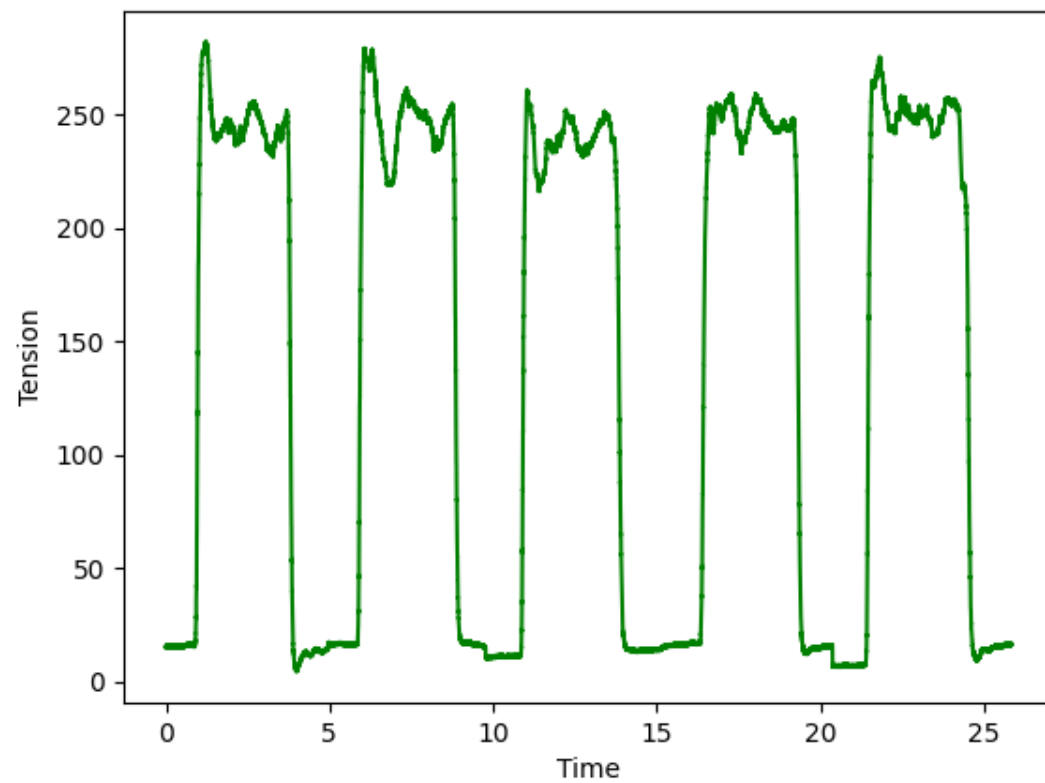


This is the emg of course of one channel out of 64 channels which means it is not much indication of the real force but sub of it , and well as seen it is actualled used as sub-group in muscle contraction so as seen when the EMF start and calthium gets out it is propotional to force, makes sense it is in negative to cause we are measuring V mostly mv so it can go both directions pf course or may be the same muscle can have both as some muscles just used as equilbram effect meaning they may send signal back to brain for calibrating the equilbram point for other muscles ,

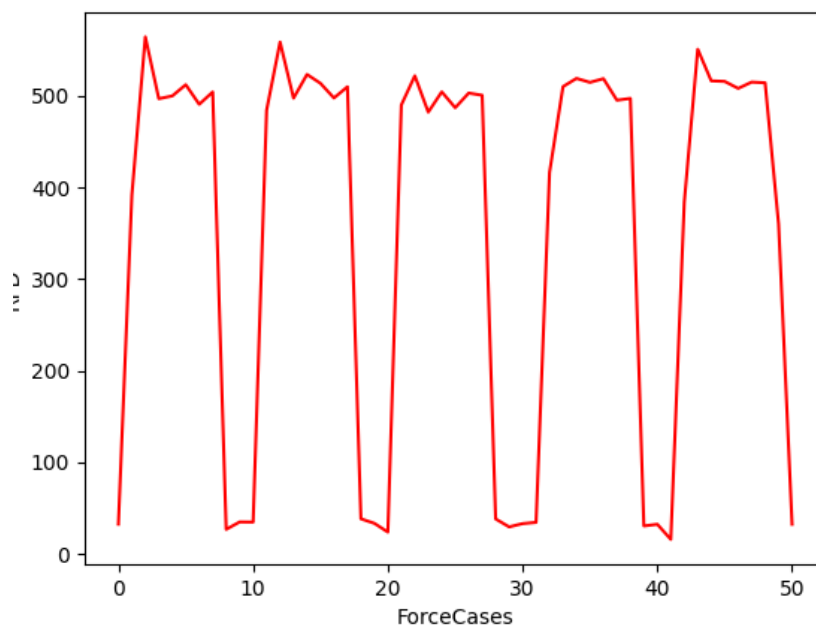
2.1 CV=69.83126441864636

2.2 Standard deviation is actually the root of variance it is made usually in population in cases of statistics around samples or big numbers which indicated for examole if I say that the 90 percent of people have range of ages from 20-60 from random samples, so percentage of them been lower than 10 is indicated by 2 segma or 3 segma , so when divided by mean that means it is cover by area of which the high population was so in short cv is indicator of how much muscles are close to the the mean of the value range indicated in its area which in case of near 70 is really good , have a lot of strong muscles

3.

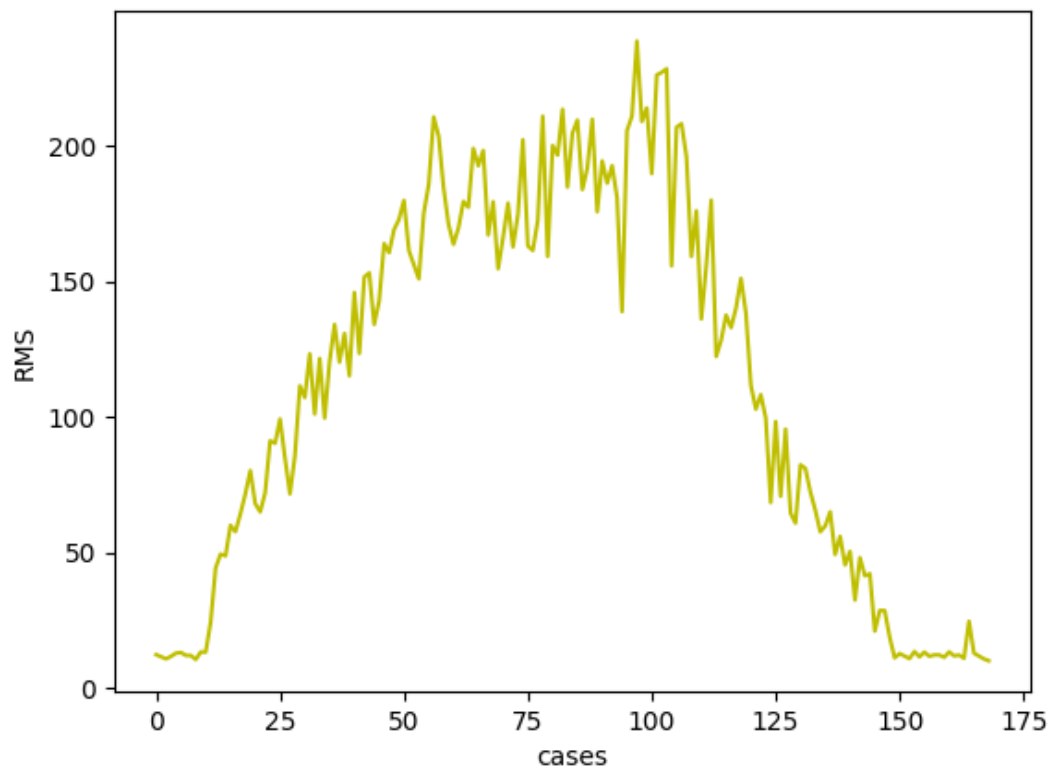


As seen the force of rapid movement can be explained by high twitch then short tetanus which achieved by using actually the small muscles with low fatigue so the relaxation can be small and can be done more and more, which of course the more done according to Henneman will be bigger and bigger in future as big muscle will start to enter the formula,



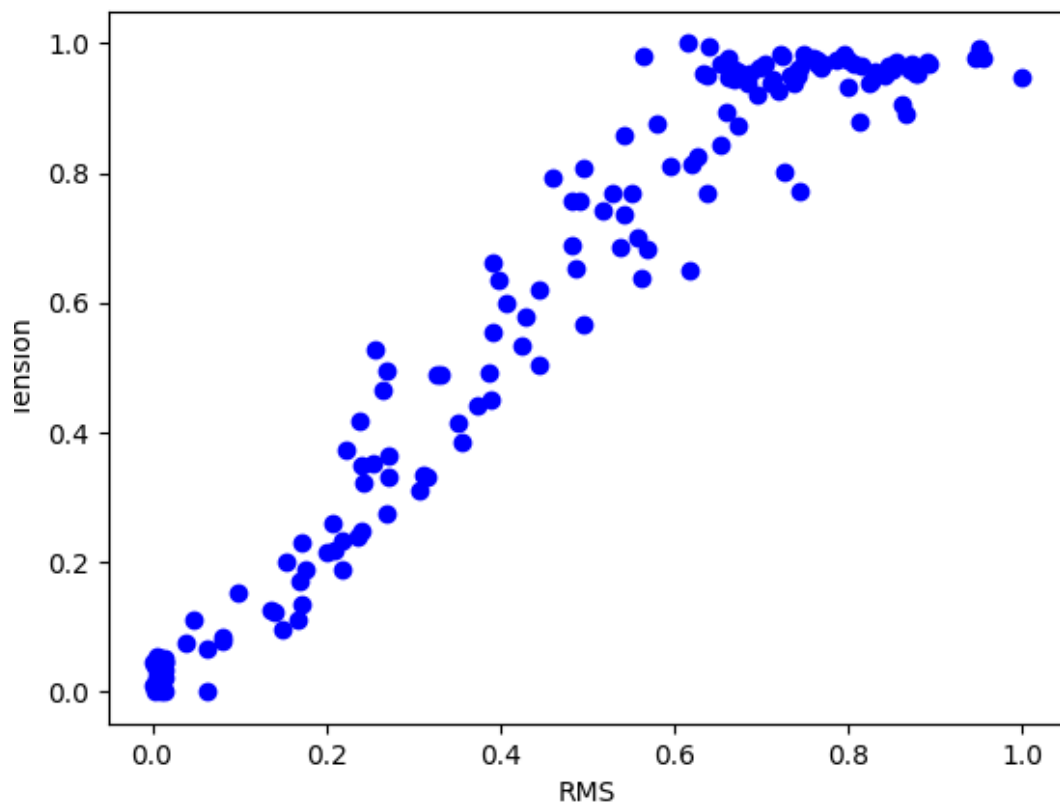
The RFD which makes sense it is just the values of max in specific time intervals which will be similar to first force graph , can be very important to get overview of the force effect at hall as regarding to ca input and effect without seeing all force graph,

4.



It seems as small force being made into signal which is way more explainable than the big emf seen in point one cause it is made as the avg of window so the small back signals of feedback and all otherstuff not be seen as much as the big output signal of the muscle,

Which if we seen in corelation should be near 1 which can be seen here



As scatter plot which had correlation of
The correlation is 0.9697617214597233