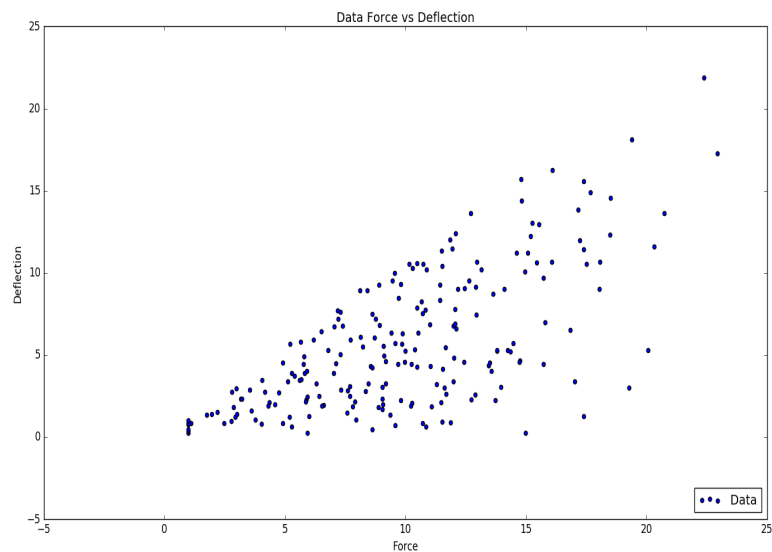
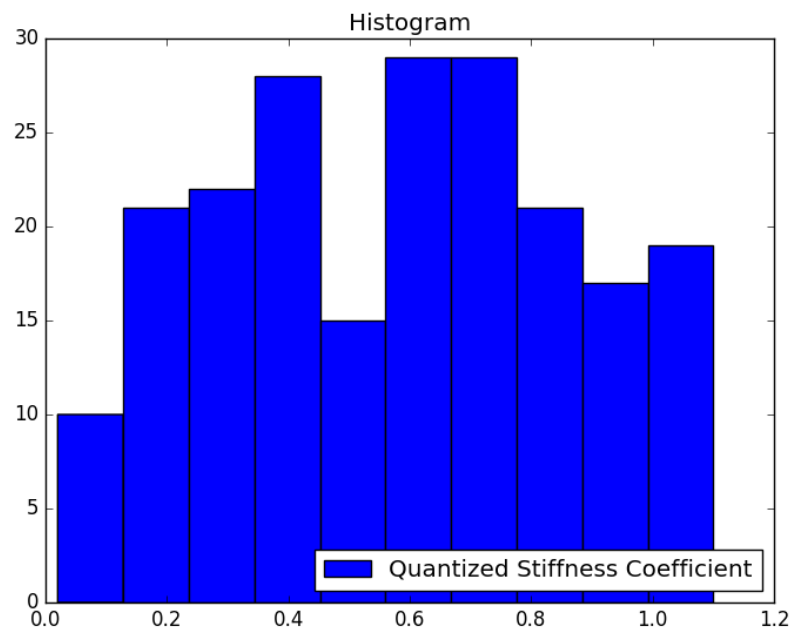


1. It will probably take me 5 hours to complete this.



2. From the scatter plot of Force Vs Deflection, we can see that as the data is scattered well and we can see the data is more or less below an imaginary line. I can see around 4 clusters one between 0 – 10 and second around 10-20 and below 5 on Y axis. Third one above that and 4th one in far upper right.

5.



7. Stiffness coefficient of 0.54 and 0.82 should be used to best separate the clusters.

8. The program just considers the first lowest value of mixed variance since we are only checking if the new variance is less than the previous one and not that if it is equal.

9. Mystery data exploratory data analysis:

a. average of mystery data:

1. median of mystery data: 14.5
2. mode of mystery data: 7
3. standard deviation of mystery Data: 8.35310570985427
4. mid range of mystery data: 22.0

b. average of mystery data after removing last element:

1. median of mystery data: 14
2. mode of mystery data: 7
3. standard deviation of mystery Data: 8.45944029930555
4. mid range of mystery data: 22.0

mode changed the least.

This change in mean, median, mode and standard deviation is due to the fact all of these take every element into consideration while calculation but mode looks at highest count element and mid range looks at max and min only. Last element was none of those.

c. The mode and mid range are least changed because mode is the value which occurs the most in the data and 16 was not the value which had the highest count so mode wasn't changed at all. Neither the min or the max are represented by 16, these are used to calculate the midrange.

10.

1. It took me 10 hours since I was lazy.
2. 0.50
3. Procrastination, in ability to develop interest, having lots of things to do, stressed about other stuff. I could find the effects of procrastination and stress [here](#), a research by Case Western University's Dianne Tice and Roy F. Baumeister. Also, a TedEx talk talking about inside a mind of procrastinator, [here](#).