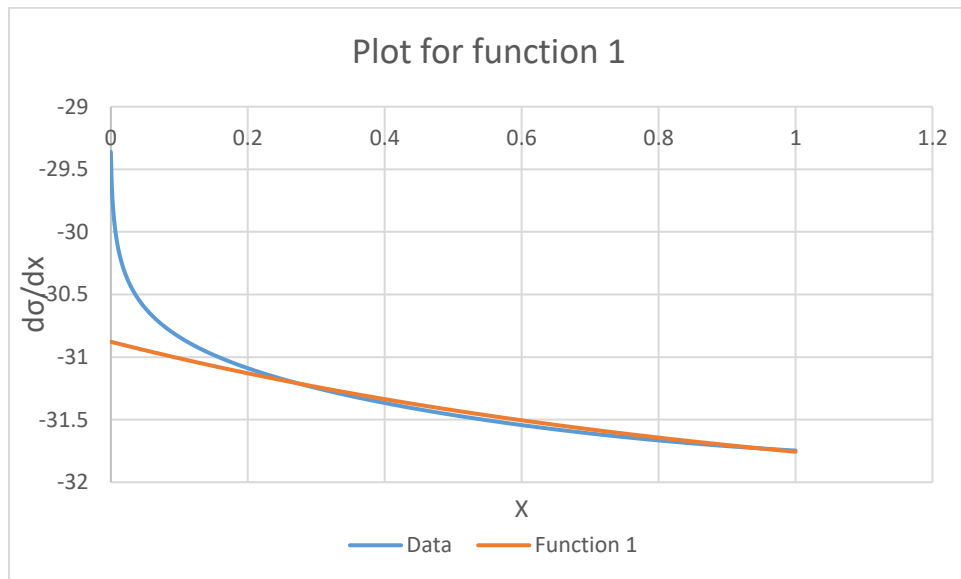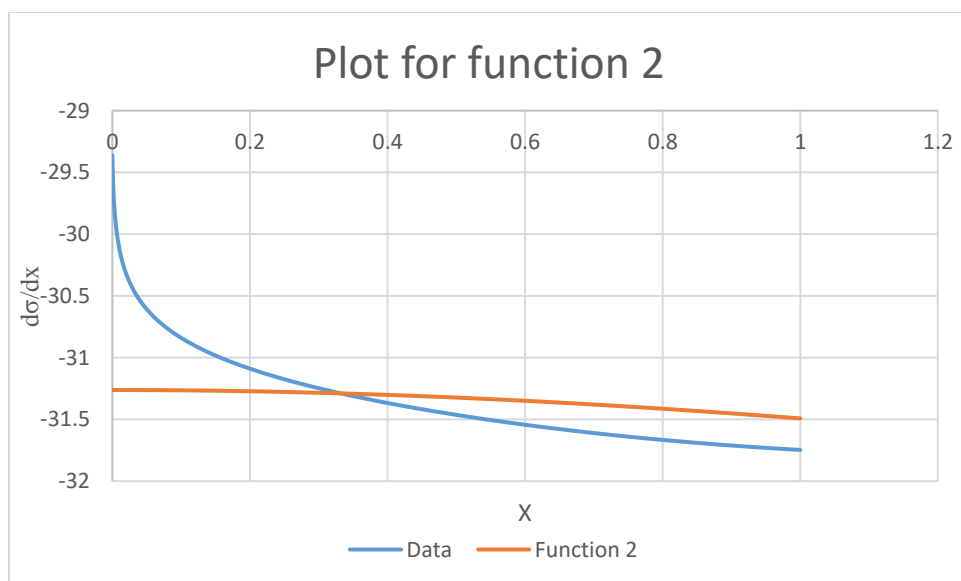# The result of using Karoo on inelasticity data

Below are the functions with the best fit which resulted from running Karoo for many times to describe the inelasticity distribution of the data. I made sure that Karoo is set to use all functions possible to allow for complexity including Exp, trig, and coefficients. Also, each function is plotted against the inelasticity data for clarity.

Function 1: -1.60653065971263*Exp(3) + 0.4*Exp(-x) - Exp(-x)*cos(3)

Function 2: cos(x)/2 - 0.606530659712633*Exp (4) *sin(2) - 1.65034065440363

All other functions are very similar to function 2 and not worth adding here. It should also be noted that function 1 resulted in almost 30% of the runs.

In conclusion, Karoo seems for one reason or the other to do a bad job on lower value of the data. As running Karoo over many days and even with evolving generation which gave good fits and using input which are expected to be part of the result did not help, I think it is best if we consider other genetic programing algorithms. As for the moment, I will keep trying and update accordingly.