Using Computation to Understand Student Writing

The technique to revise hand written English essay draft of the students before turning it into a final version of the essay through computation using Python code. We are not machine grading an essay in this procedure and not assessing instructor. We analyse specific, targeted characteristics of writing to produce quantitative measures regarding their characteristics. This produces code that will allow students and instructors to see those quantitative measures.

Edit distance is a way of quantifying how dissimilar two strings (e.g., words) are to one another by counting the minimum number of operations required to transform one string into the other. Also this checks for sentence alignment and comparing the sentence in an order and search for substitutions, insertion and deletions.

Consider two sentences each from the draft and the final essay and compute the differences:

Five Insertion/Deletion (Distance = 5*1= 5)

2 Substitutions (2*2= 4)

Total distance is 9.

Total distance would be 29 which is 9/29=0.31.