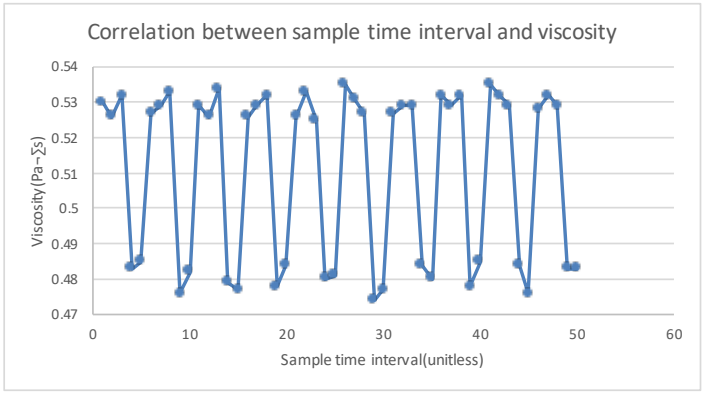
Assignment Ex2_Ind_Task 5

Problem Description I am to create a plot for a technical presentation using the viscocity file.

Input Section:

Sample time interval (unitless)	Viscosity (Pa¬∑s)
1	0.53
2	0.526
3	0.532
4	0.483
5	0.485
6	0.527
7	0.529
8	0.533
9	0.476
10	0.482
11	0.529
12	0.526
13	0.534
14	0.479
15	0.477
16	0.526
17	0.529
18	0.532
19	0.478
20	0.484
21	0.526
22	0.533
23	0.525
24	0.48
25	0.481
26	0.535
27	0.531
28	0.527
29	0.474
30	0.477
31	0.527
32	0.529
33	0.529
34	0.484
35	0.48
36	0.532
37	0.529
38	0.532
39	0.478
40	0.485
41	0.535
42	0.532
43	0.529
44	0.484
45	0.476
46	0.528
47	0.532
48	0.529
49	0.483
50	0.483

Calculation Section:



Output Section:

I will creat a connected scatterplot so it clearly shows how each variable affect the other one.

a) Does the data appear to have outliers or errors in measurement? Why or why not?

No because they are spread out pretty evenly.

b) What percentage of the measurements meets the specification of being within [0.475,0.525] (Pa·s)?

20

Ans: 20/50 = 40% of the measurements meets the specification of being with [0.475, 0.525]

c) Given your answer to question b) above and your plot, summarize the engineer's main message to the engineering team about the process.

Through the test of the 50 time intervals, we know that the ciscosity level is not always within the required range. Because only 40% of the measurements meets the specification of being within [0.475,0.525] (Pa·s), there is a likely probability that customers will reflect that the oil is not within the specific range.