Assignment-3: Fitting Data to Models

Syam SriBalaji T

EE20B136
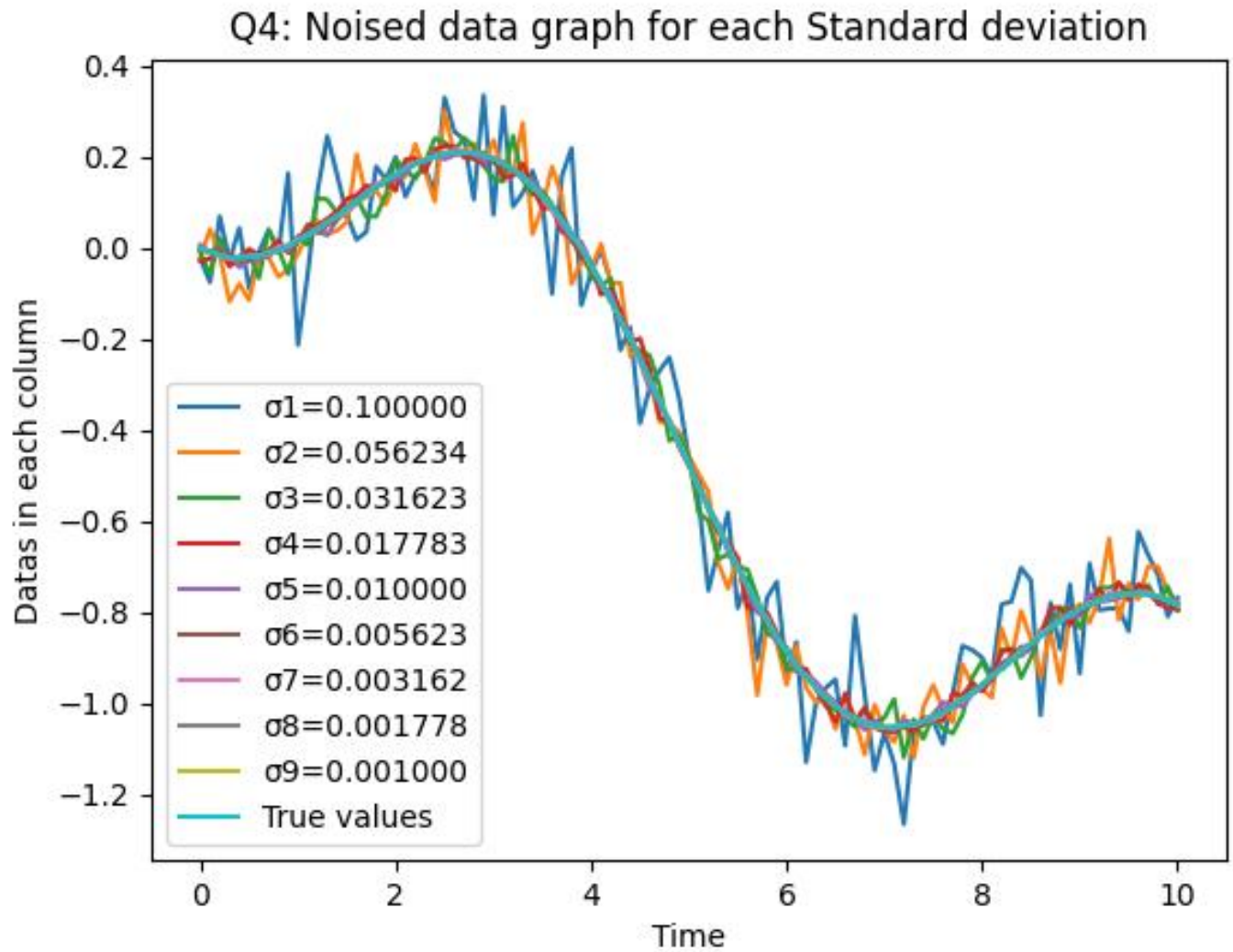
February 18, 2022

EE2703 :Jan-May 2022

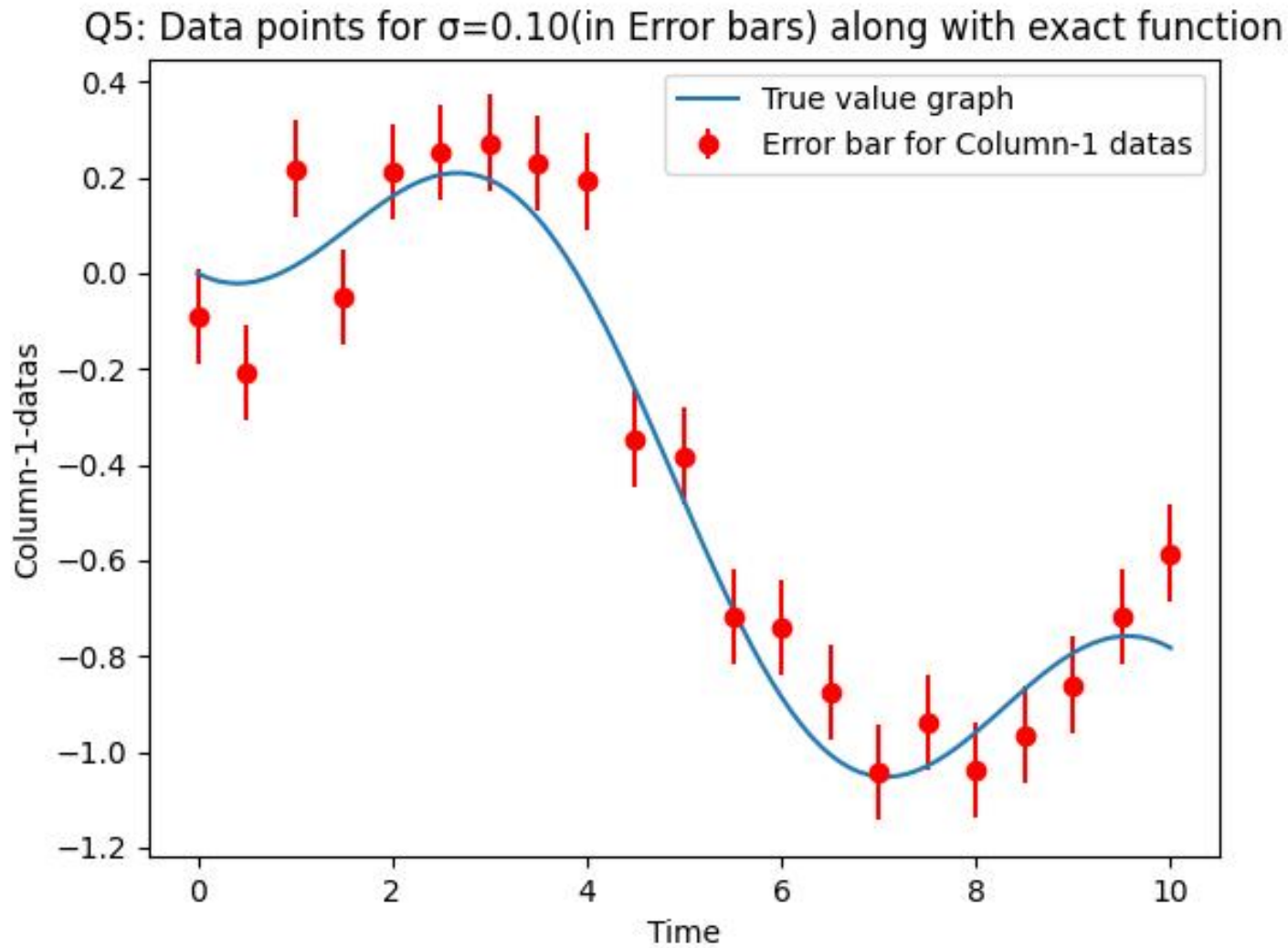# Question:4

True value graph mentioned here is found by: $g(t;A,B) = A*J2 (t) +B*t$,where A=1.05,B=-0.105

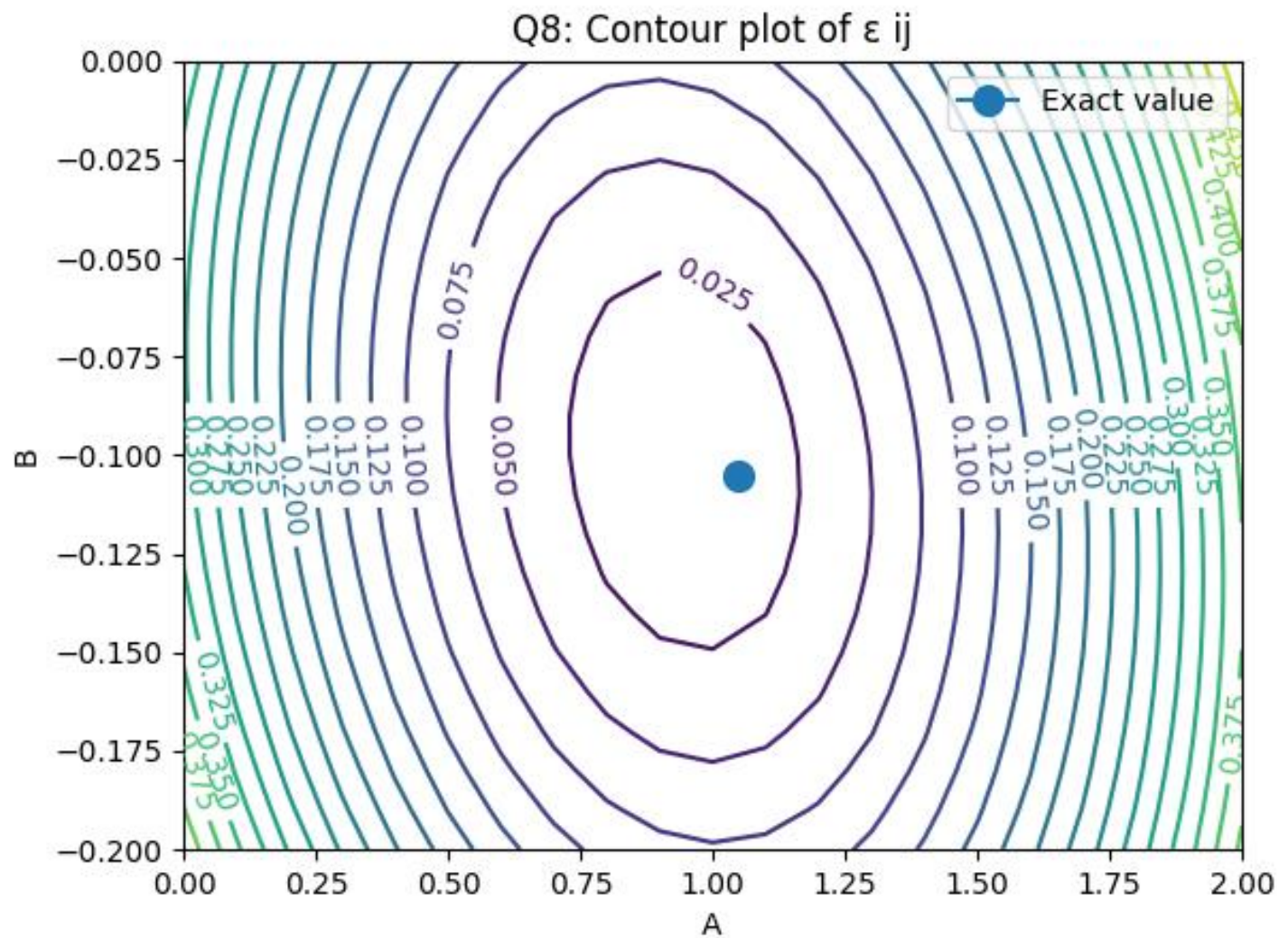The other plots are Data of each column vs. Time

Question:5

Plot for the first column of data with error bars and also only every 'Fifth' data item is plotted here to make the plot readable. And the True value graph is also plotted to see the divergence in error bar.

Q5: Data points for σ=0.10(in Error bars) along with exact function
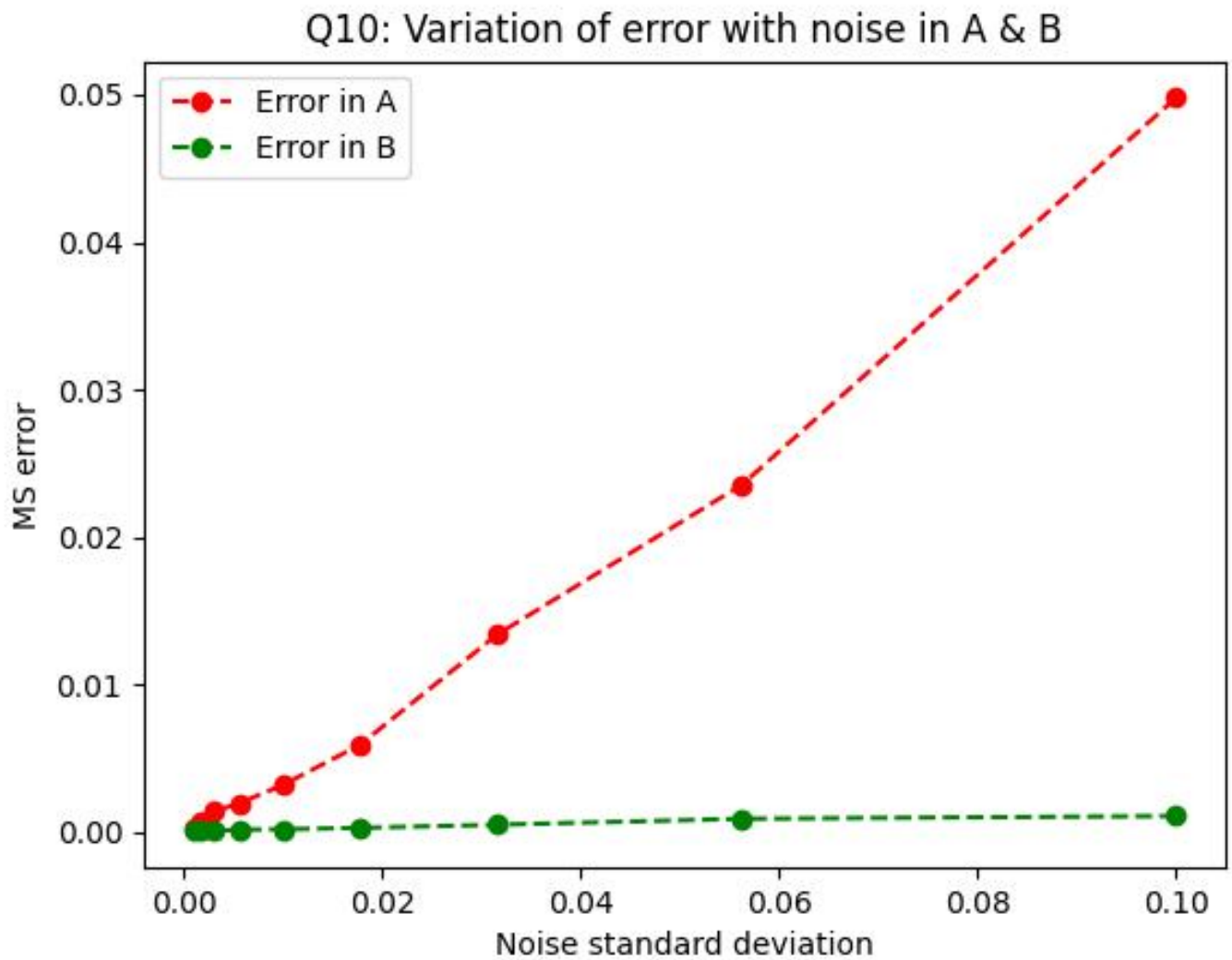
Question:8

Plotting of the contour graph using the Mean squared matrix found (of Column 1 data). Yes, it has minimum (single).

Question:10

Creating different sets of noised datas and finding graph of errors in estimation of A & B.

Yes, Both Error for A & B increases with increase in Standard deviation, while A increases more drastically than B.

Question:11

Plotting the same Errors of A & B as in previous question but with the help of loglog() function

We can notice the increase in Error values wrt to Standard deviation clearly here.

Q11: Variation of error with noise in A & B (by using loglog())