

COMPARISON REPORT

Parameters used in Optimization Algorithms:

Learning_rate=0.01

epochs = 100

threshold = 1e-3

	Dataset 1 Set1_Batch_25.csv	Dataset 2 Set2_Batch25.csv	Dataset 3
Closed Form Solution:	Theta0/Intercept: 2.0000000000000014 Theta1/Coefficient: 2.9999999999999999 Theta2/Coefficient: 3.9999999999999982 MSE: 3.407879110554771e-29	Theta0/Intercept: 3.439506898845515 Theta1/Coefficient: 2.7225839583439773 Theta2/Coefficient: 4.1503270220455795 MSE: 191.2848930770562	Theta0/Intercept: 1.980873936792669 Theta1/Coefficient: 3.220466924233429 Theta2/Coefficient: 3.7114175023949696 MSE: 118.99871283120159
SGDRegressor:	Theta0/Intercept: 1.50796259 Theta1/Coefficient: 3.052605889146556 Theta2/Coefficient: 4.038244246274355 MSE: 0.030893954270308333	Theta0/Intercept: 0.89059367 Theta1/Coefficient: 2.81878238215599 Theta2/Coefficient: 4.356094235178288 MSE: 89.89891630846928	Theta0/Intercept: 1.628249 Theta1/Coefficient: 3.568290577512742 Theta2/Coefficient: 3.7747924609979795 MSE: 102.12567771785612
BGD:	Theta0/Intercept: 1.99822398 Theta1/Coefficient: 3.00022865 Theta2/Coefficient: 4.00011796 MSE: 5.300973571001021e-07	Theta0/Intercept: 1.63334632 Theta1/Coefficient: 2.46531469 Theta2/Coefficient: 4.65350881 MSE: 86.219702807016	Theta0/Intercept: 1.07089245 Theta1/Coefficient: 2.79738179 Theta2/Coefficient: 4.43423058 MSE: 100.44256777991103