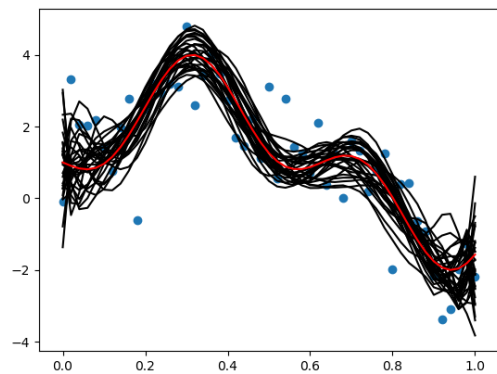
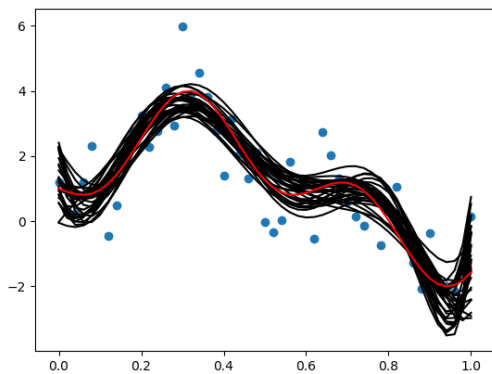
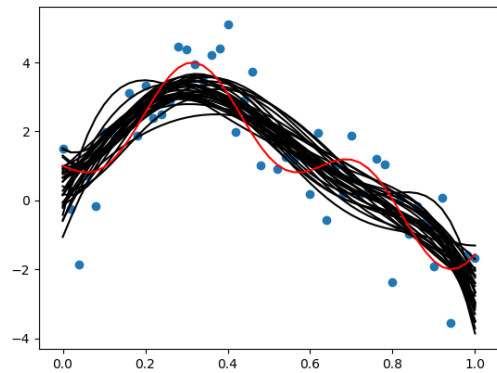
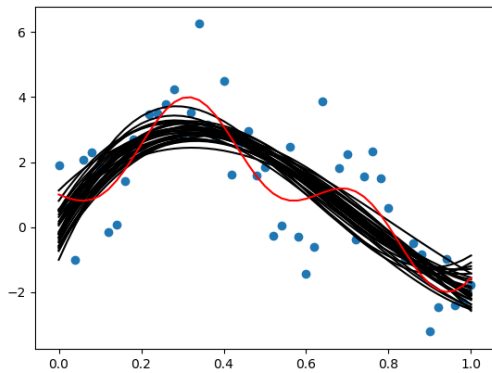
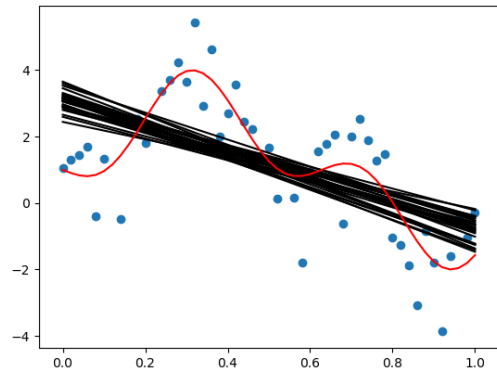
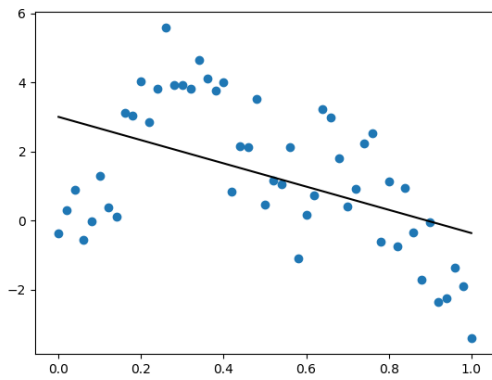


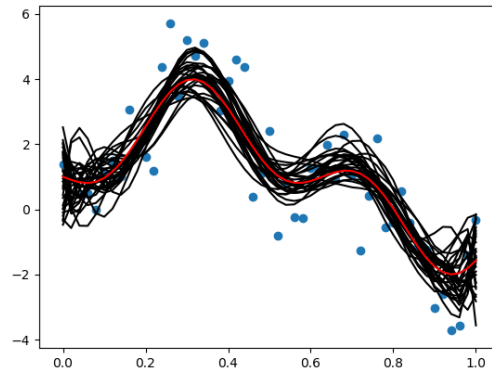
EE526 Homework 1

Xingche Guo

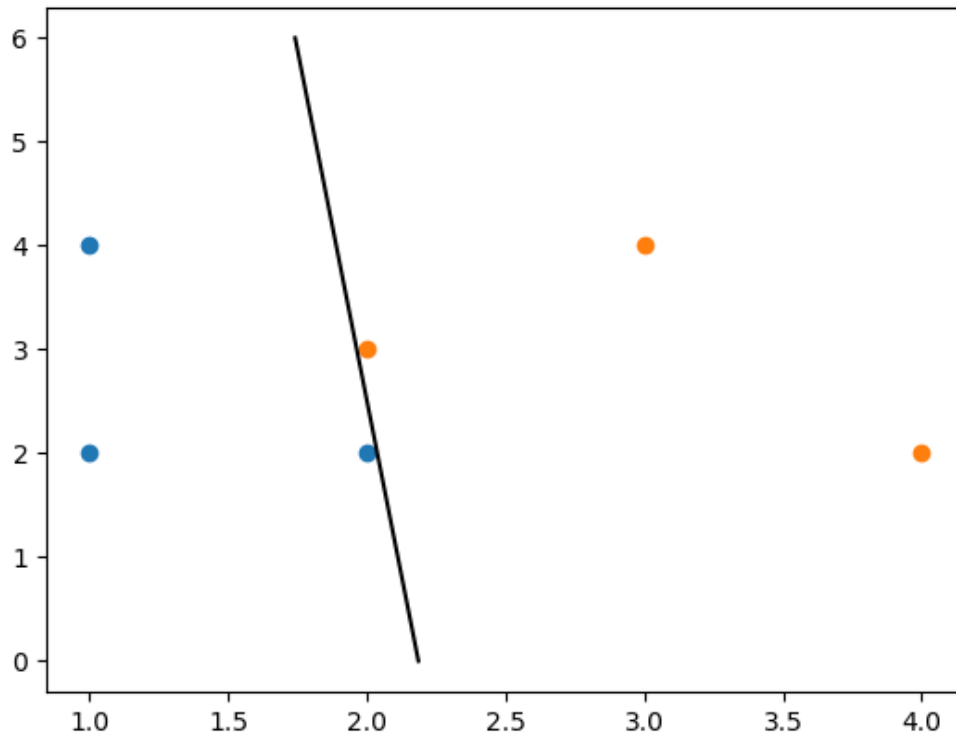
September 23, 2019

Problem 1





Problem 2



Problem 3

Let $\beta_0 = (0, \dots, 0)^T$, jump out of the loop if: $\frac{\|\beta - \beta_0\|}{\|\beta_0\| + \epsilon}$ less than a certain threshold, then:

Learning Rate	10^2	10	1	10^{-1}	10^{-2}	10^{-3}	10^{-4}
Training Error Rate (unnormalized)	0.095	0.094	0.094	0.110	0.094	0.101	0.145
Training Error Rate (normalized)	0.087	0.049	0.052	0.055	0.062	0.076	0.082
Testing Error Rate (unnormalized)	0.190	0.188	0.188	0.188	0.188	0.184	0.236
Testing Error Rate (normalized)	0.139	0.132	0.124	0.122	0.131	0.148	0.157

red number means obtain the maximum iteration number/the algorithm fail to converge.