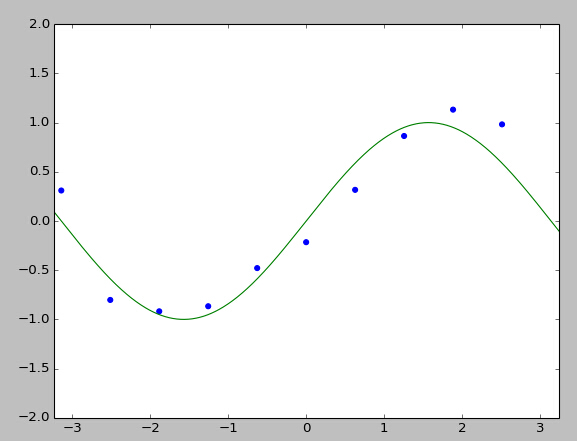
Homework1 Report

1. sample the function curve of y=sin(x) with Gaussian noise

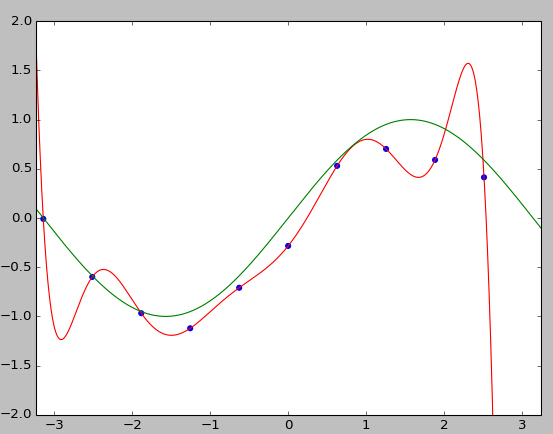


1. fit degree 3 and 9 curves in 10 samples

Degree 3:

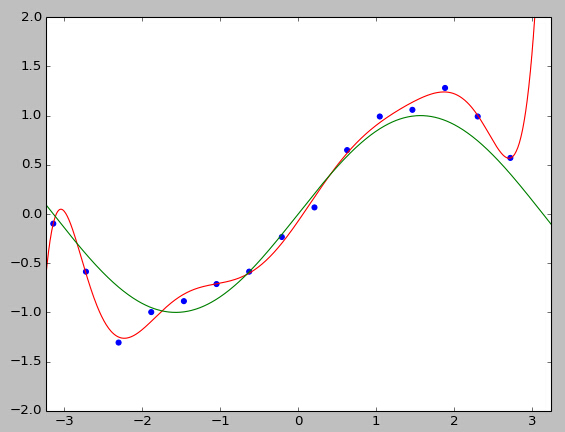
![C:\Users\L\AppData\Roaming\Tencent\Users\271333958\QQ\WinTemp\RichOle\LFQF8@M[ER~6F(5{@](CT[G.jpg](data:image/jpeg;base64,)

Degree 9:

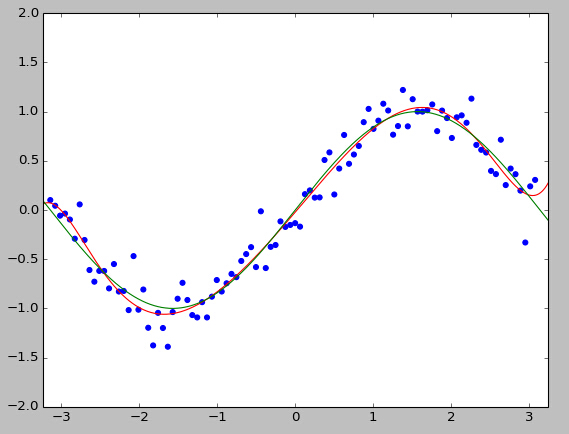


1. fit degree 9 curves in 15 and 100 samples

15 samples:

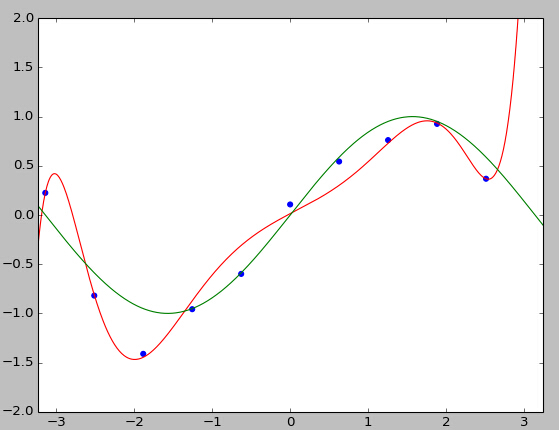


100 samples:

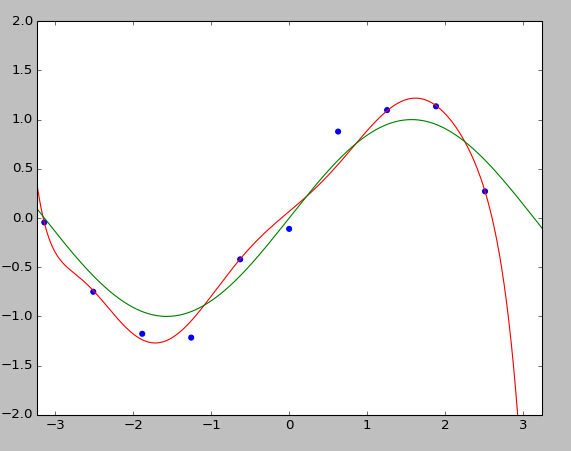


1. fit degree 9 curve in 10 samples but with regularization term

r=1



r=0.5



R=0.01

