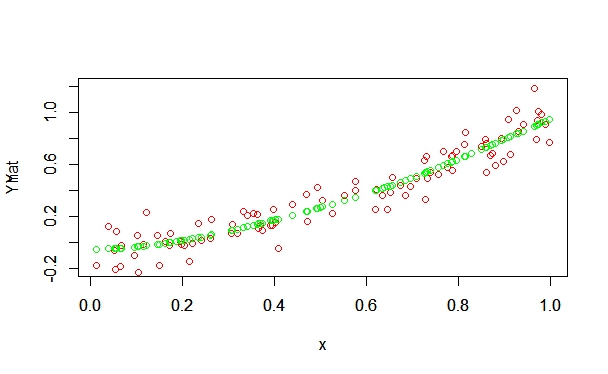
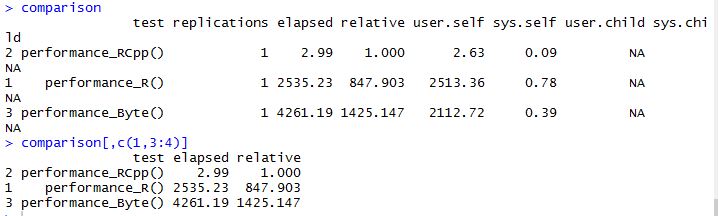
**Name: Salil Kanetkar**

**UCLA ID: 704557096**

**HW 7 Submission:**

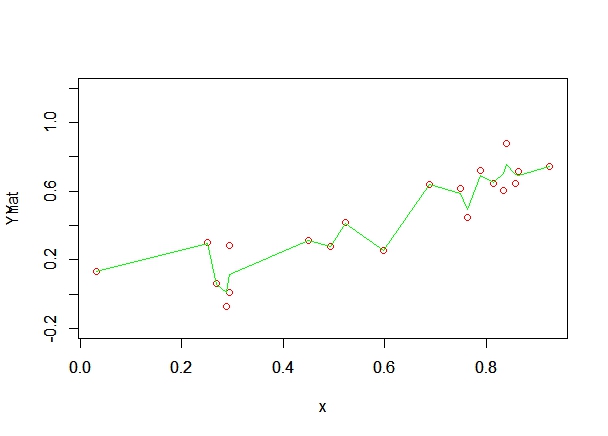
**Performance Function:**

****

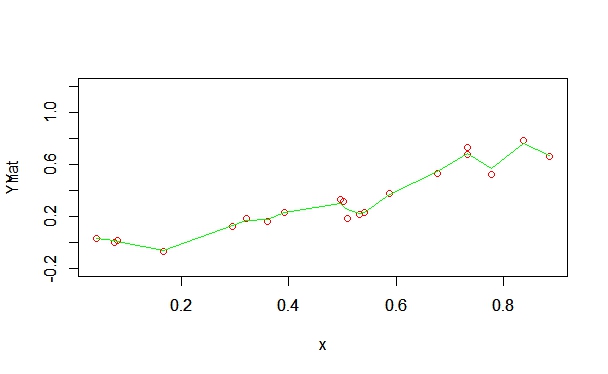
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**Plots of the learned spline curves for different values of lambda:**

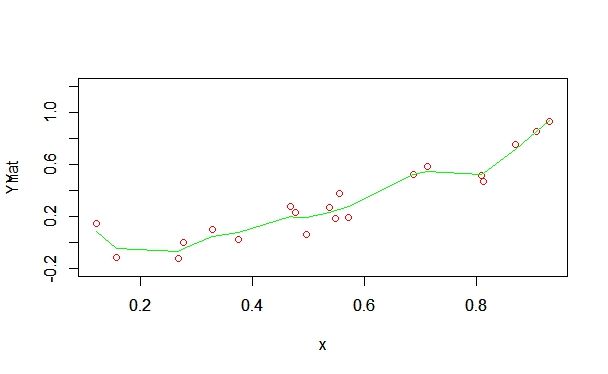
**Lambda= 0.0001**

****

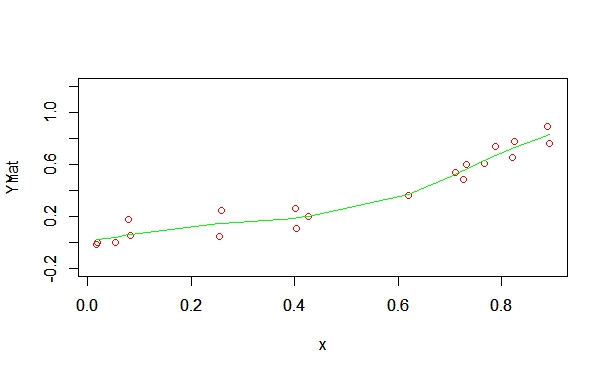
**Lambda = 0.001**

****

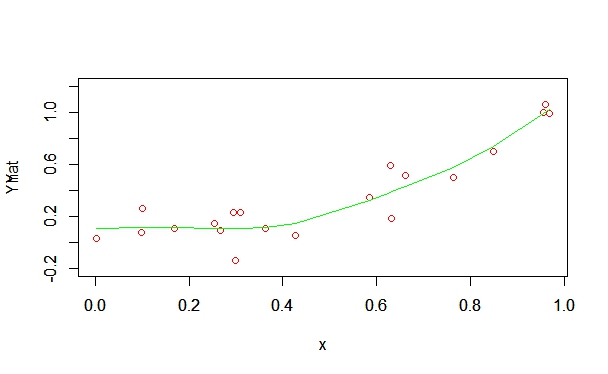
**Lambda = 0.01**

****

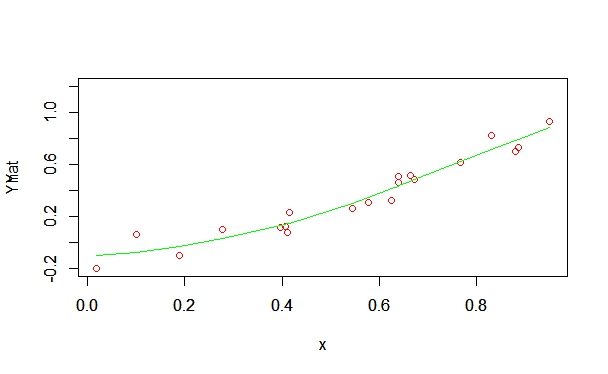
**Lambda = 0.1**

****

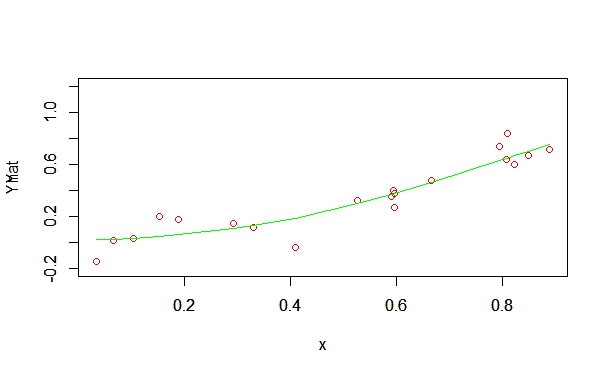
**Lambda = 0.5**

****

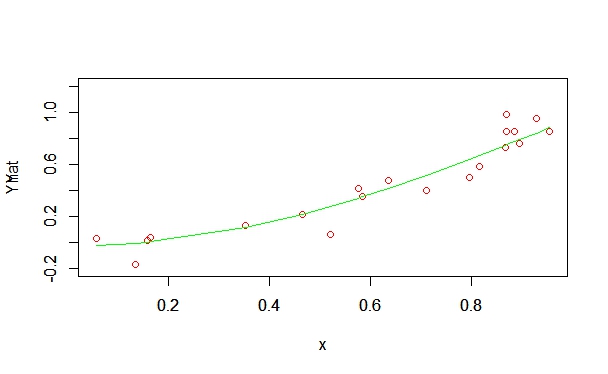
**Lambda = 1**

****

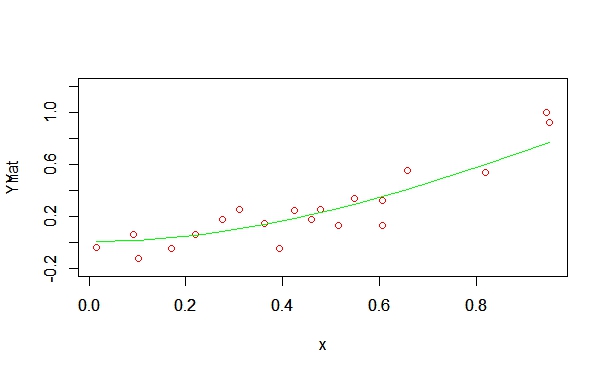
**Lambda=10**

****

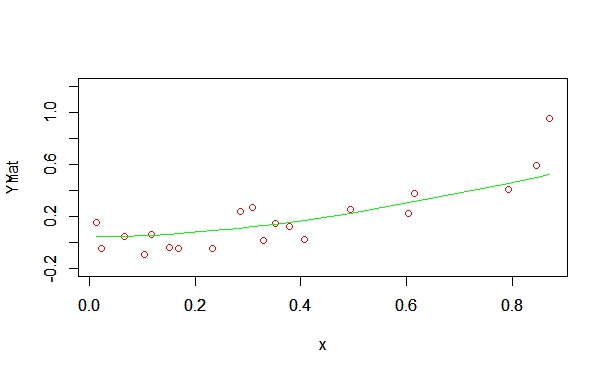
**Lambda=25**

****

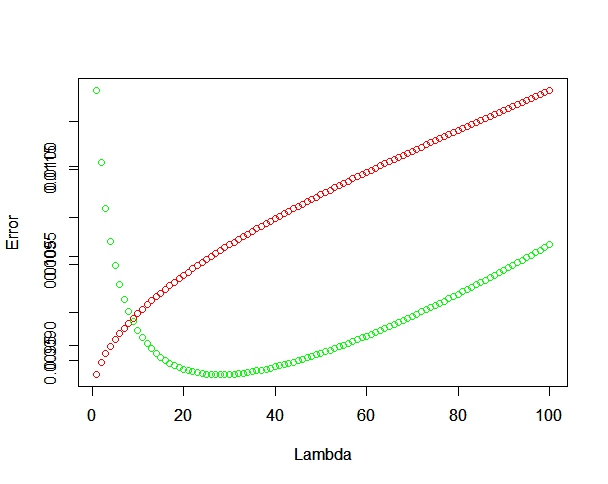
**Lambda=50**

****

**Lambda=100**

****

**Training and Testing Plots for Spline Curves:**

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**Green is the Testing Error and Red is the Training Error.**

At a lower value of Lambda, the model is overfitting the data. Later the model improves. Towards the very end, it again starts under fitting.