04-analysis.Rmd

Results

Now that we have a better understanding of each of these regression methods, lets look at the data in order to see how each regression performed:

Table 1: Mean Squared Error For Each Regression

	Mean Squared Error
MSE of Least Squares	0.15
MSE of Ridge Regression	0.17
MSE of PLS Regression	0.14

Lets take a look at how the estimated regression coefficients differ for each regression:

Table 2: Beta Coefficients for Each Regression

	Coefficient Names	Coefficients for PLS Regression	Coefficients for Least Squares	Coefficients for Ridge Regression
1	Income	-0.58	-0.55	-0.41
2	Limit	0.66	0.87	0.58
3	Rating	0.66	0.43	0.58
4	Cards	0.04	0.04	0.04
5	Age	-0.03	-0.01	-0.04
6	Education	0.01	0.01	0.01
7	Gender.Male	-0.00	-0.04	0.01
8	GenderFemale	0.00		0.02
9	MarriedYes	-0.07	-0.03	-0.05
10	EthnicityAsian	0.04	0.08	0.04
11	EthnicityCaucasian	-0.01	0.05	0.01

Figure 1: Coefficient Plot