Assignment 1: Measuring Performance in Classification Models.

Submission Guideline: Organize your answer in a word document and submit to Blackboard.

Follows are the output of a binary classification model. 1 = Positive; 0 = Negative.

Observation	True Target	Predicted Probability.
1	1	.95
2	1	.92
3	0	.87
4	0	.74
5	1	.73
6	1	.71
7	0	.68
8	1	.65
9	1	.64
10	0	.61
11	0	.56
12	0	.51
13	0	.48
14	0	.41
15	1	.32
16	1	.28
17	0	.25
18	0	.18
19	0	.17
20	0	.12

1. Form the confusion matrix when the cutoff value for positive outcome is c=.6. Calculate the sensitivity, specificity, precision, and F1-Score when c = 0.6
2. Among the cutoff value of 0.1, 0.2, . . . , 0.9, what is the cut-off value that produce the greatest F1-Score?
3. Sketch the ROC curve.
4. Sketch and interpret a few points of the Cumulative Lift
5. Sketch the Cumulative % Response