

```
Call:
glm(formula = dy_payer ~ ., family = "binomial", data = DTtrain)
```

```
Deviance Residuals:
```

Min	1Q	Median	3Q	Max
-2.3141	-0.0569	-0.0569	-0.0569	3.8358

```
Coefficients:
```

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-7.35601	0.11834	-62.158	< 2e-16 ***
dx_pay_count	0.34510	0.10945	3.153	0.001616 **
dx_payerTRUE	2.88486	0.22013	13.105	< 2e-16 ***
dx_active_days	0.97215	0.03803	25.565	< 2e-16 ***
d0_session_count	-0.08835	0.02617	-3.376	0.000736 ***
dx_session_count	0.04610	0.00737	6.256	3.96e-10 ***

```
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```

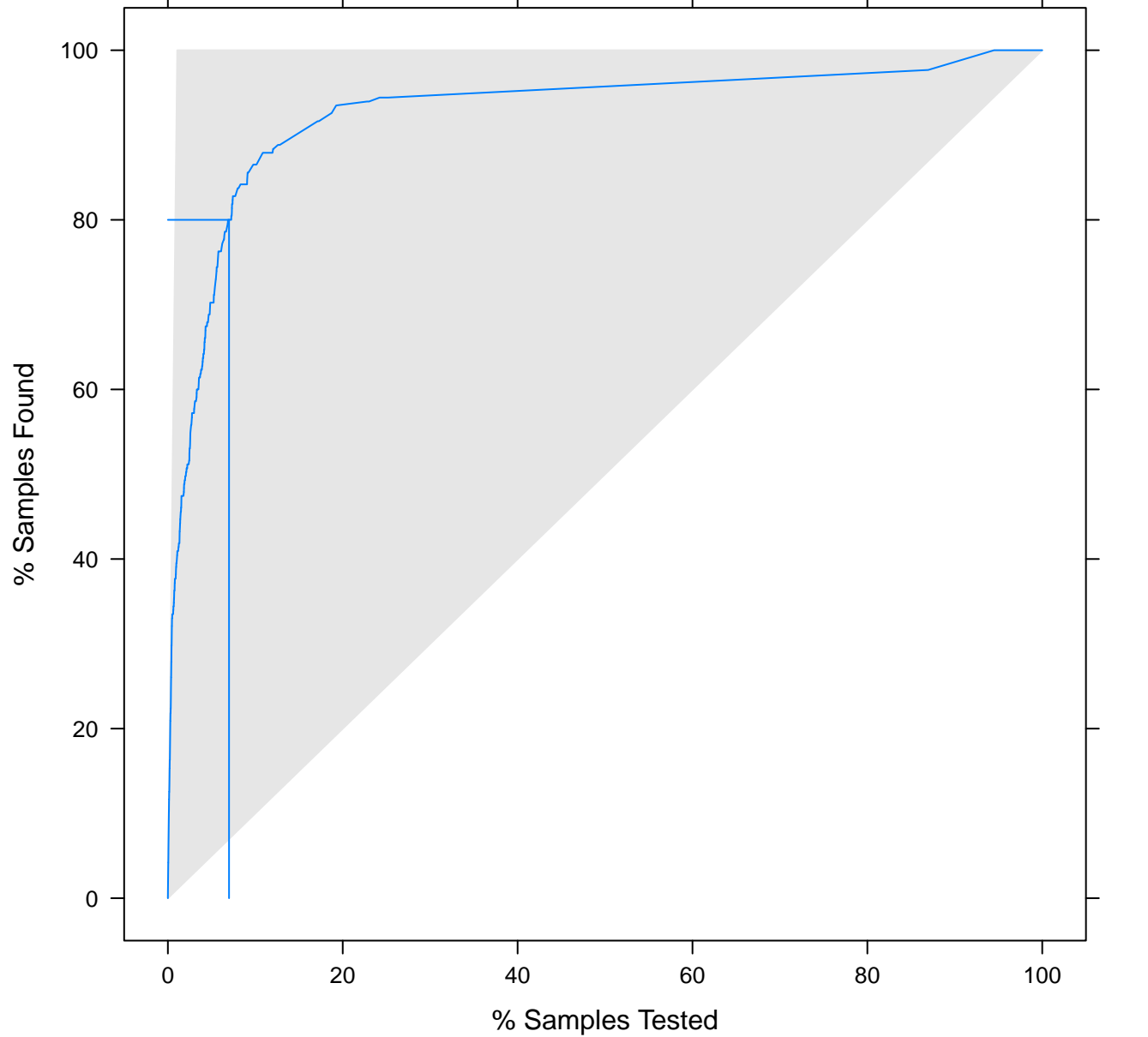
```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
(Dispersion parameter for binomial family taken to be 1)
```

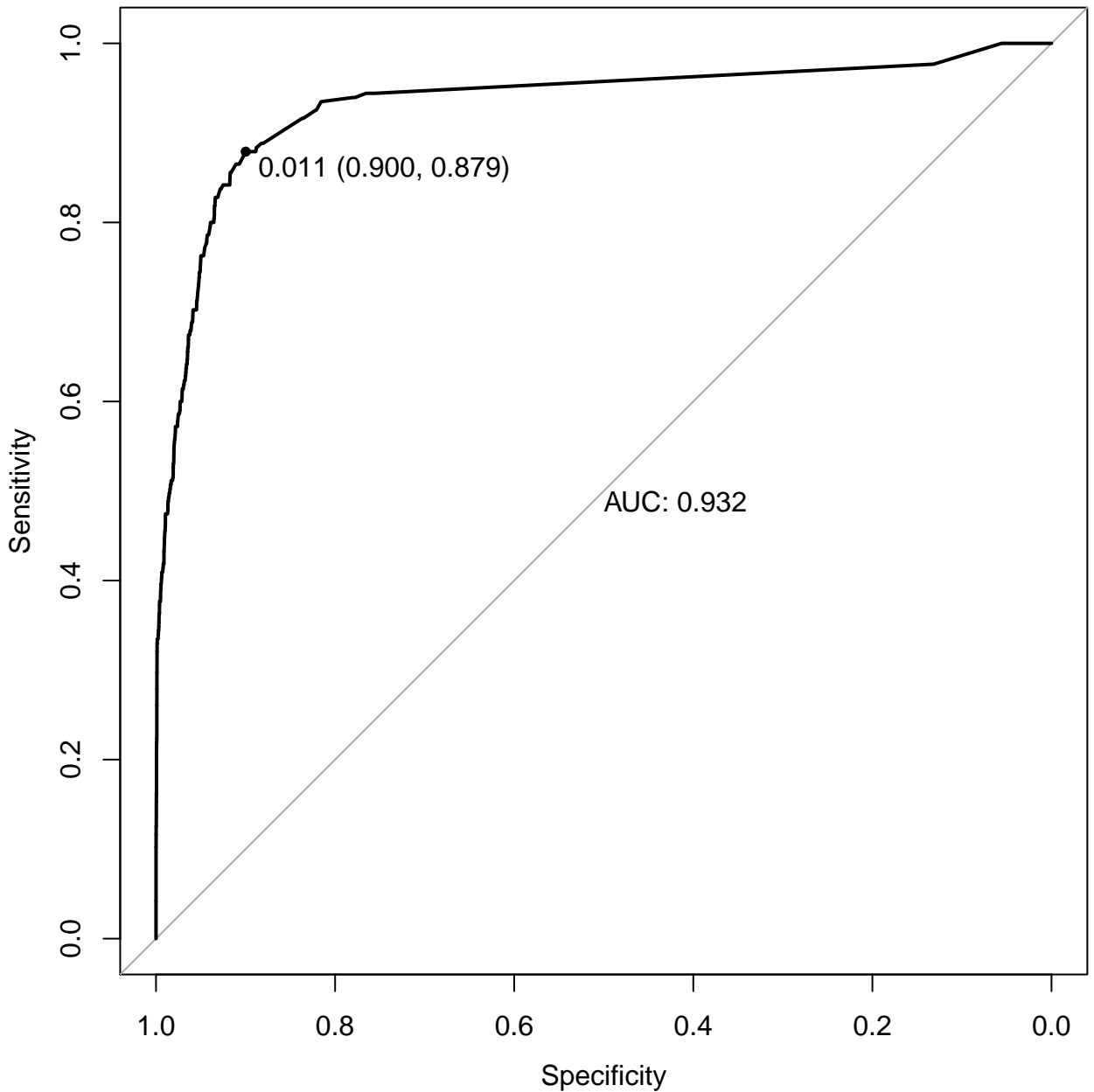
```
Null deviance: 9543.4  on 80000  degrees of freedom
Residual deviance: 5672.0  on 79995  degrees of freedom
AIC: 5684
```

```
Number of Fisher Scoring iterations: 9
```

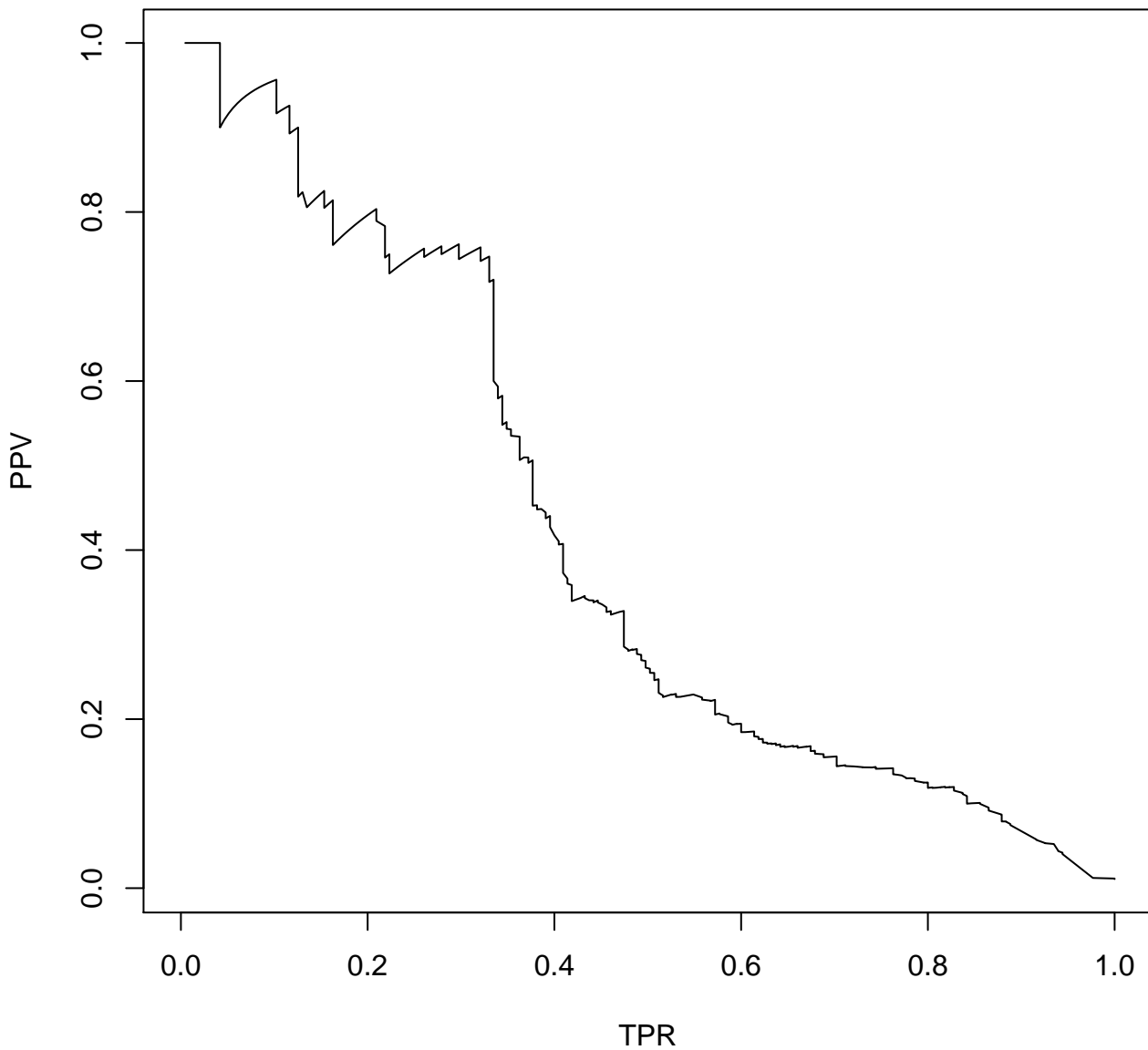
Lift chart



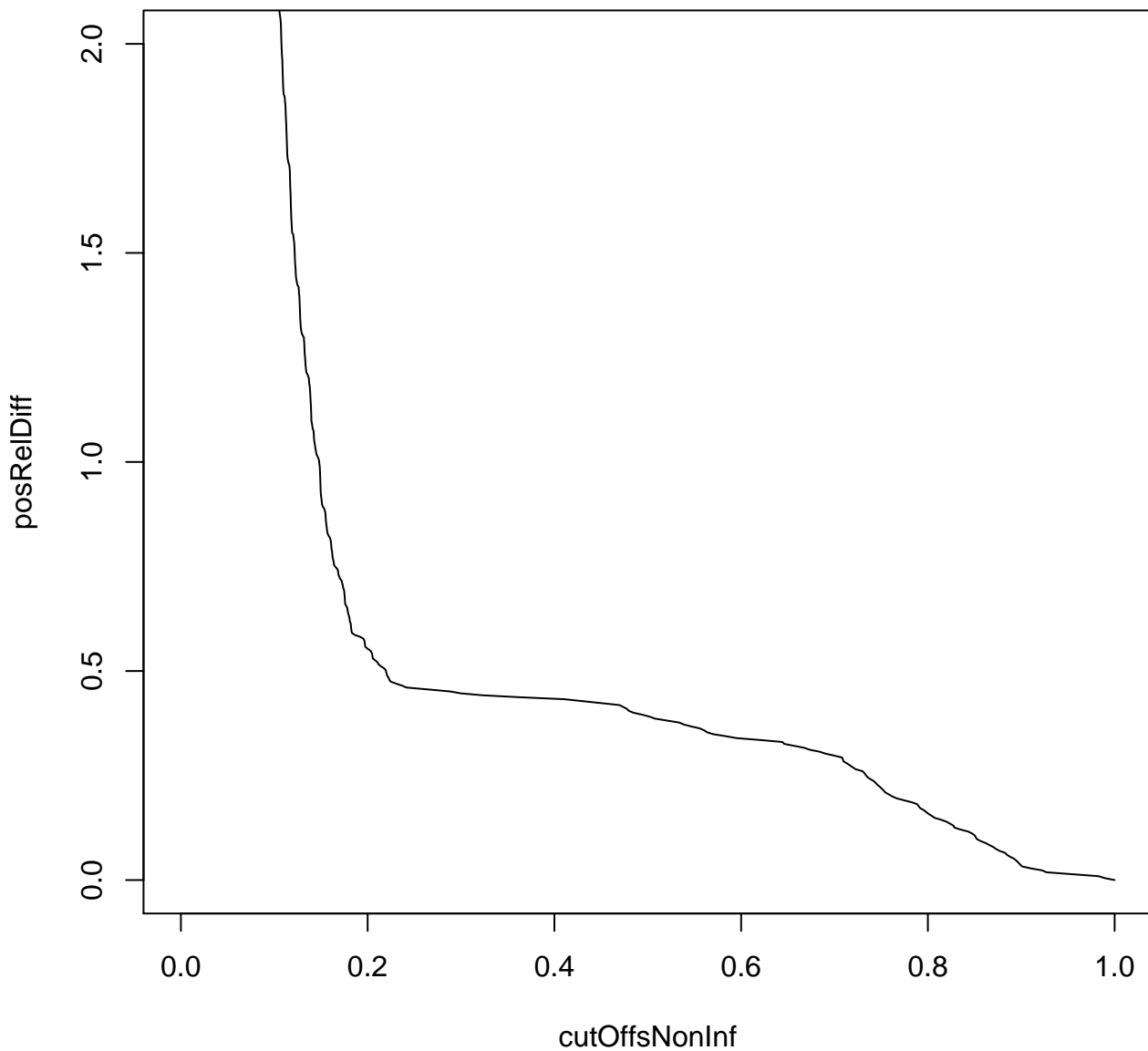
ROC curve



Sensitivity vs. Precision



predicted positives / actual positives



```
[1] "1st matrix - threshold based on the ROC curve"  
[2] "0.011082327861501"  
[3] "2nd matrix - threshold based on the predicted vs. actual count of positives"  
[4] "0.148302298674516"
```

Confusion Matrix and Statistics

	Reference	
Prediction	FALSE	TRUE
FALSE	17802	26
TRUE	1982	189

Accuracy : 0.8996

95% CI : (0.8953, 0.9037)

No Information Rate : 0.9892

P-Value [Acc > NIR] : 1

Kappa : 0.1416

Mcnemar's Test P-Value : <2e-16

Sensitivity : 0.87907

Specificity : 0.89982

Pos Pred Value : 0.08706

Neg Pred Value : 0.99854

Prevalence : 0.01075

Detection Rate : 0.00945

Detection Prevalence : 0.10856

Balanced Accuracy : 0.88944

'Positive' Class : TRUE

Confusion Matrix and Statistics

	Reference	
Prediction	FALSE	TRUE
FALSE	19657	128
TRUE	127	87

Accuracy : 0.9872

95% CI : (0.9856, 0.9888)

No Information Rate : 0.9892

P-Value [Acc > NIR] : 0.9966

Kappa : 0.3992

Mcnemar's Test P-Value : 1.0000

Sensitivity : 0.40465

Specificity : 0.99358

Pos Pred Value : 0.40654

Neg Pred Value : 0.99353

Prevalence : 0.01075

Detection Rate : 0.00435

Detection Prevalence : 0.01070

Balanced Accuracy : 0.69912

'Positive' Class : TRUE