1. INTRODUCTION

$$f\left(Y_i\right) = p_i^{Y_i}\left(1 - p_i\right)^{1-Y_i} \quad Y_i = 0,1; i = 1,\ldots,n.$$

$$\left(\pi_i \quad 1\right) \quad \pi_i \quad \frac{e^{\beta_0 + \beta_1 X_1}}{1 + e^{\beta_0 + \beta_1 X_1}}$$

!   %

$$AIC_p = -2\log L(b) + 2p = -2\left[\sum_{i=1}^{n} Y_i\left(X_i^T\right) - \sum_{i=1}^{n} \log\left(1 + e^{X_i^T}\right)\right] + 2p$$

2.3 GRADIENT BOOSTING

2.3.1 Regression Trees, overview

$$\hat{f}(X) = \sum_{m=1}^{5} c_m I\{(X_1, X_2) \quad R_m\}$$

2.3.1 Regression Trees, detail

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	$\sum_{m=1}^{|T|} N_m Q_m(T)$	

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$$z_i = -\frac{\#}{\# f(x_i)} \, !\, (y_i, f(x_i))\Big|_{f(x_i)=\hat{f}(x_i)}$$

$$\#\qquad\#$$

$$_k = \operatorname*{argmin}_{x_i \ S_k} \ (y_i, \hat{H}(x_i)+\ )$$

!   )

Table 1

$$\hat{p}_i = 0.5 ,\!\!$$

Response Variables \ Predictor Variables	Yr1 FA	Yr1 Sshp	Yr1 Grnt	Yr1 Loan	Ann. FA	Ann. Sshp	Ann. Grnt	Ann. Loan
Grad. in 6 Yrs		●			●	●		
Grad. in Any		●				●		
Yrs to Grad.					●	●		
Yr1 Ret.		●						
Yr2 Ret.		●						
Yr3 Ret.		●						

Figure 3.

! $"

Figure 4.
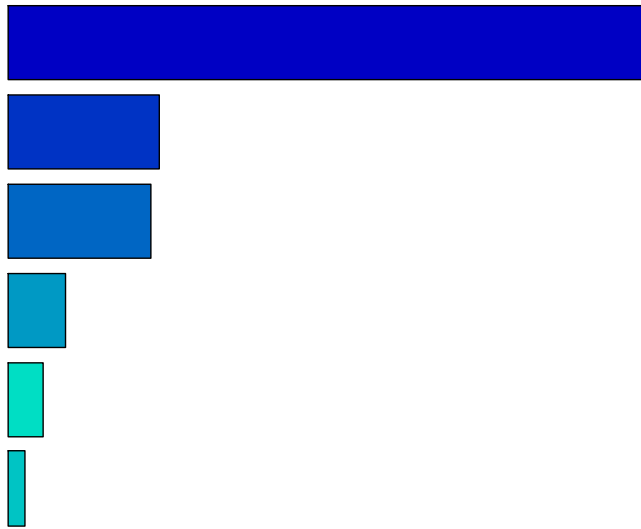
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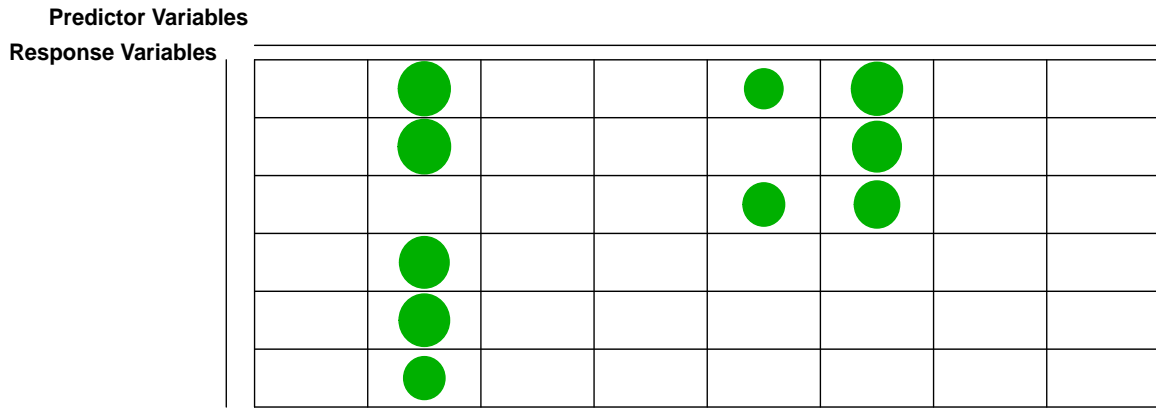
5. APPENDIX

5.1. R code to simulate data.

REFERENCES

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