Customizing Ticket Sales

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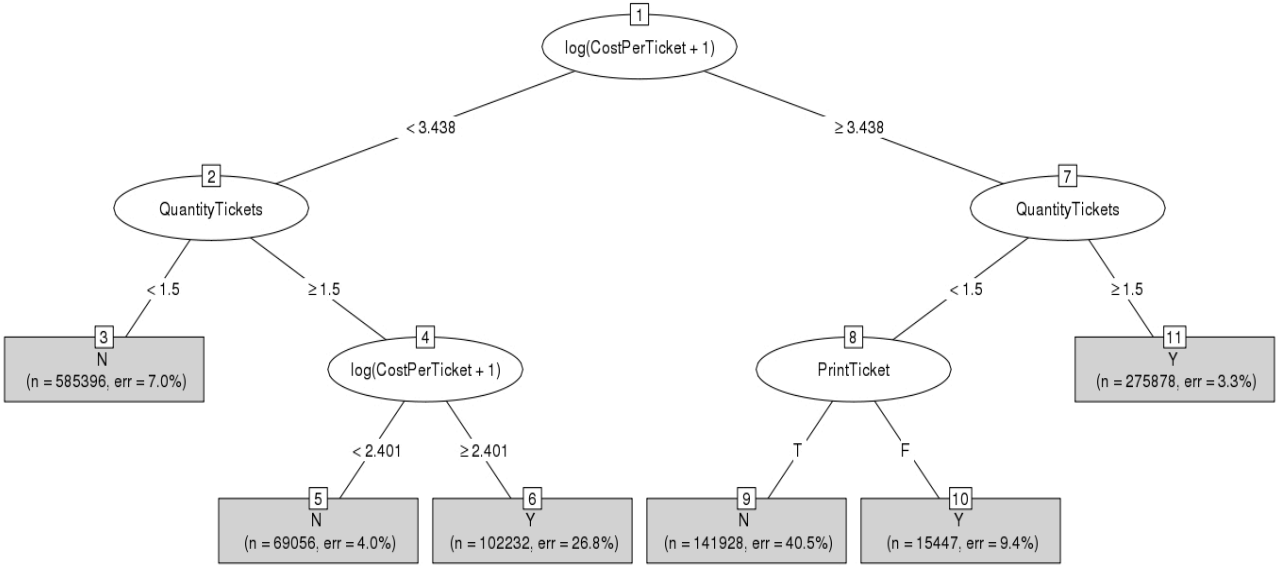
Goals

Predict how to differentiate between mobile and non mobile users to customize and optimize ticket sales

Expanding on bids for ads on less frequent searches that also require a low cost-per-conversion rate



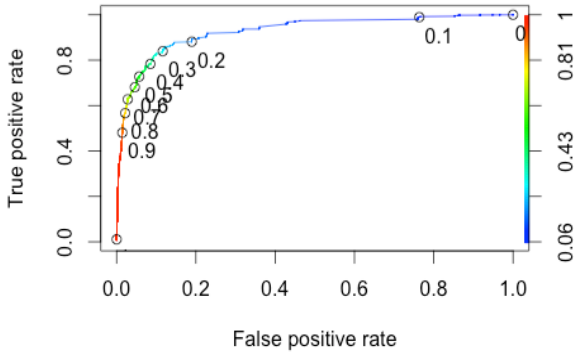
297824 (TP)	16180 (FN)	Sum: 314,004
43818 (FP)	152151 (TN)	Sum: 195,969
Sum: 341,642	Sum: 168,331	Total: 509,973

Accuracy: 0.8823506

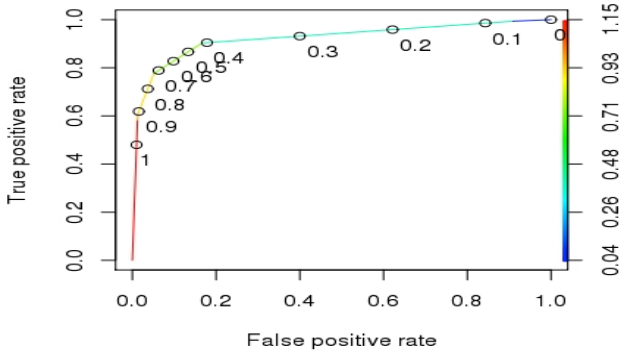
Decision-Making and Scalper Data

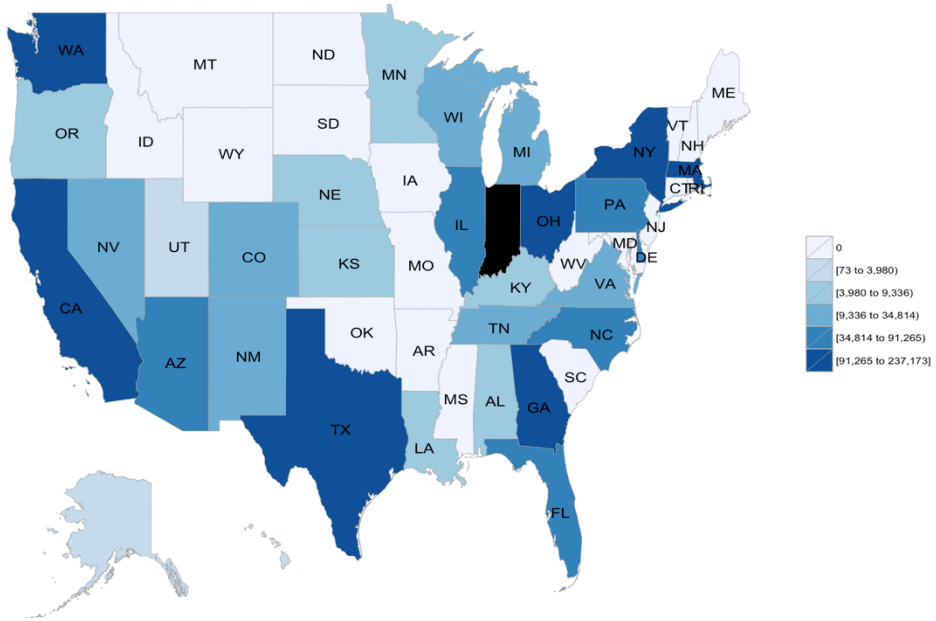
$$\widehat{Mobile} = \hat{\beta}_0 + \hat{\beta}_1 log(CostPerTicket + 1) + \hat{\beta}_2(QuantityTickets) + \hat{\beta}_3(PrintTicket)$$

Logistic Output:ROC Curve



rPart Output: ROC Curve



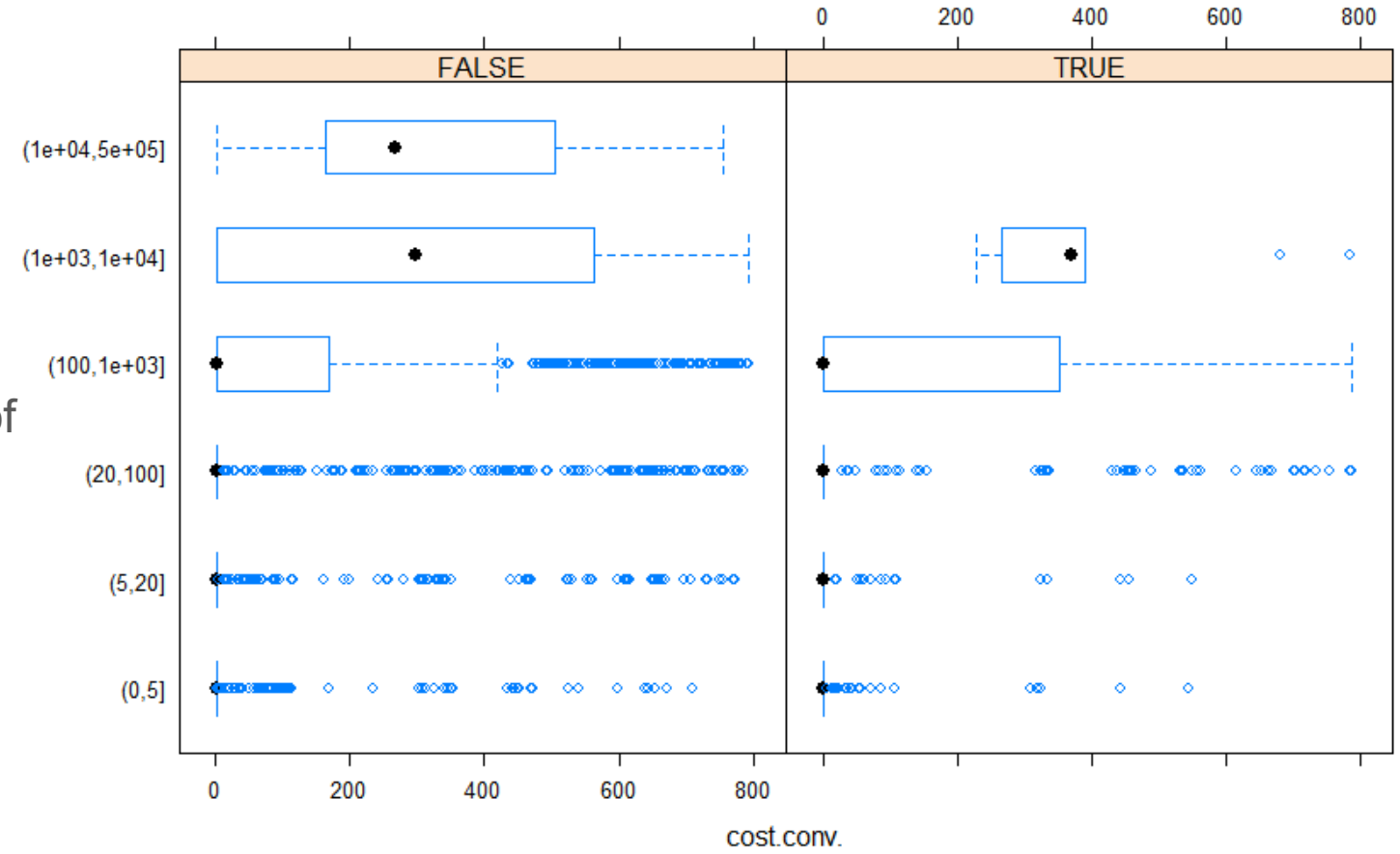


AUC for both Curves:
0.92205

Adwords

Distributions of impressions - Really really right skewed!

Plot the number of impressions by cost per conversion



Conclusions & Suggestions

Mobile

Insight - Cost per ticket, quantity of tickets purchased and whether the ticket was printed or not are essential attributes for predicting whether mobile platform was used

Suggestion: Add mobile demographic data to draw further conclusions

Adwords

Insight - cost per conversion is lowest for uncommon keywords (low imps)

Suggestion - use Word2Vec to find similar permutations, build ML system using A/B testing to test out best permutations

Increase conversions for low cost!

Spot the Bot!

event_name	count	tixbought	tixmean
Premier Parking: Rock The Bells	570	570	1.000000
Blossom Music Center Parking: Lil Wayne	123	123	1.000000
Premier Parking: Zz Top	121	121	1.000000
Super Premier Parking : the police	109	109	1.000000
Premier Parking: Brooks & dunn/zz top	97	97	1.000000
Stevie Wonder: Jones Beach Theater Premier Parking	89	89	1.000000
Premier Parking: Brad Paisley	88	88	1.000000
Verizon Wireless Premier Parking: Marc Anthony	82	82	1.000000