Trends in Customer Engagement That You *Auto* Know

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22nd of March, 2015

1 Introduction

Using data provided by edmunds.com (a third party car purchasing website), our project focused on how individual engagement in the site effected whether or not a transaction was ultimately made.

We defined engagement using several factors:
- number of total page views
- additional research and reading on Edmunds (advice pages, calculator pages, comparator pages, maintenance pages, etc)
- percentage of clicks that were on advertisements

To understand how these types of engagement affected transactions, we focused on:
- if a transaction occurred
- percentage of manufacturer suggested retail price paid
- the time between submitting the lead and transaction completion

2 Data Overview and Munging

We used two of the data sets provided: visitor and transaction. These data tables include information on individual visitors (including some information on their demographics and their relationship to the site) and individual transactions (including information on the car bought, who bought it, and various pricing metrics.)

To conduct our analysis, some visitors had to be removed. Since information is recorded as total interactions with the site, visitors who bought more than one car didn't have accurate information on how much time they had spent on the site before each purchase. We also found many of the variables had unbelievable outliers. Several sales were listed as costing the customer over a million times the manufacturer suggested retail price paid, and some transactions had the car sale occur before the visitor was listed as first having been to edmunds.com.

3 Analysis and Conclusion

Many of the types of engagement we looked at appeared to have no effect on customer purchasing tendencies. The only correlation that was statistically significant and appeared strong was the connection between total page views and transaction occurrence. Visitors who ended up buying a car visited 30% more pages than those who didn't.

From this we see that visitor engagement is not a strong predictor of final purchases. Other factors are at play in determining what eventually leads to a successful purchase.