

# ADVERTISEMENTS BASED ON CONSISTENCY

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TEAM: WA JUE JI

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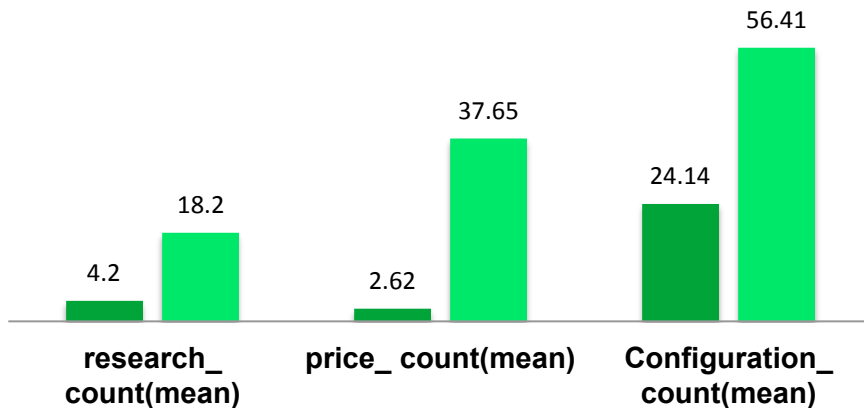
# APPROACH

## 1. Consistent customers vs. inconsistent customers

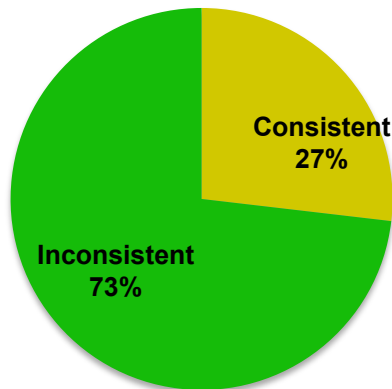


## 2. Comparison between two groups

■ Consistent ■ Inconsistent



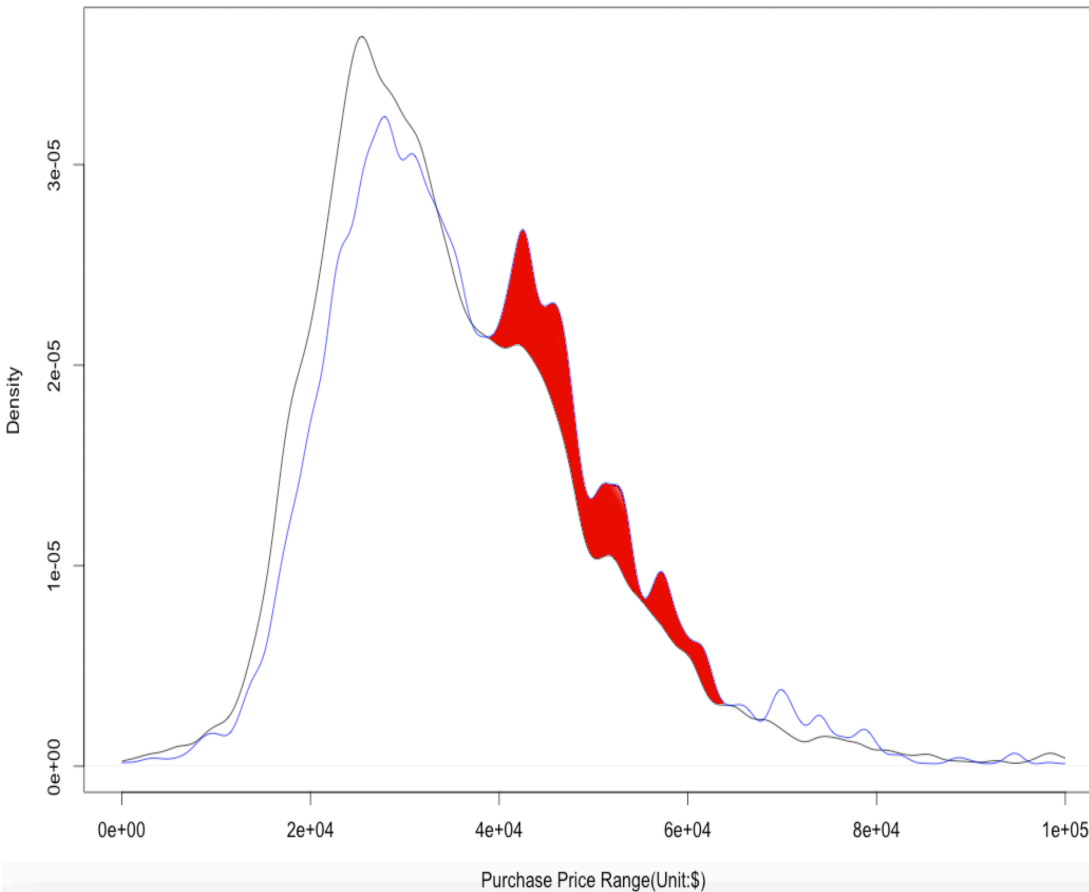
Advertisement Click



	Consistent	Inconsistent
Clik_total(mean)	0.58	1.58
Clik_total(sd)	3.43	8.11
Clik_total(median)	0	0
price_count(mean)	2.62	37.65
price_count(sd)	7.42	79.66
price_count(median)	0	20
research_count(mean)	4.2	18.2
research_count(sd)	11.43	42.85
research_count(median)	0	7
Consideration_count(mean)	50.21	198.48
Consideration_count(sd)	94.82	350.71
Considertation_count(median)	27	113
Configuration_count(mean)	24.14	56.41
Configuration_count(sd)	59.66	101.7
Configuration_count(median)	11	27
Option_count(mean)	0.87	11.75
Option_count(sd)	2.25	7
Option_count(median)	0	19.68
Page_views(mean)	108.35	381.34
Page_views(sd)	243.69	858.28
Page_views(median)	48	198

# MODEL

Density of Customers' Purchase Price Range



Call:

```
glm(formula = cons.f ~ clk_total + consideration_count + price_count +  
research_count + configuration_count + option_count + tot_dwelling_time +  
session_count, family = binomial, data = myTraining)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-8.4904	-0.2925	-0.2364	-0.2313	2.6883

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-3.625e+00	2.299e-02	-157.704	< 2e-16 ***
clk_total	4.778e-03	2.433e-03	1.963	0.0496 *
consideration_count	2.102e-03	2.433e-04	8.642	< 2e-16 ***
price_count	4.169e-02	2.130e-03	19.574	< 2e-16 ***
research_count	-5.194e-03	1.083e-03	-4.796	1.62e-06 ***
configuration_count	-1.731e-03	3.181e-04	-5.441	5.29e-08 ***
option_count	3.548e-01	7.225e-03	49.111	< 2e-16 ***
tot_dwelling_time	3.430e-08	2.451e-08	1.400	0.1616
session_count	7.095e-03	1.180e-03	6.013	1.82e-09 ***

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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: 57763 on 79525 degrees of freedom  
Residual deviance: 32390 on 79517 degrees of freedom  
AIC: 32408

Number of Fisher Scoring iterations: 7

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## CONCLUSION AND RECOMMENDATIONS

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### Conclusion:

1. Most people (88.1% of 99,396) who visited edmunds.com are not typical car-shoppers in their consideration stage. Hence, a good dealership is more important for them.
2. The remaining 11.9% were inconsistent in their searches, apparently more easily influenced in their decision making by different advertisements and expert reviews.
3. Based on the preliminary model we built, edmunds.com can identify whether a potential customer is consistent or not and provide information accordingly.
4. The proportion of customers who bought cars within the price range 40k-60k is higher in the inconsistent group (23%) than in the consistent group (15%).
5. There is significant difference between the mean purchase price of the consistent group (\$30400, SD=86), and that of the inconsistent group (\$33622, SD=240)

### Recommendations:

1. We recommend that edmunds.com and dealers provide inconsistent customers with more advertisements and suggestions in search results that pertain to price, models and car researches.
  2. Based on the preliminary model we built, edmunds.com can identify whether a potential customer is consistent or not and provide information accordingly.
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