

# Determine the Effectiveness of a Multichannel Advertising Campaign

Group 4

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# Problem & Data

- Measure the effectiveness of multichannel marketing
  - Was the advertising campaign effective?
  - Which customer segments responded best/worst?
- 10,000 simulated customer records
- 9 variables (all categorical)
- Source: <http://minethatdata.blogspot.com/2006/11/please-help-our-industry-measure.html>

Name	Type	Possible Values
Recency	categorical	Grouped into 7 segments
Frequency	categorical	Grouped into 4 segments
Monetary	categorical	Grouped into 3 segments
Receive Catalog?	categorical	Yes/No
Receive Postcard?	categorical	Yes/No
Receive E-mail #1	categorical	Yes/No
Receive E-mail #2	categorical	Yes/No

**Response variable:**

Net Sales	categorical	Yes/No
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# Data Exploration

## Recency Trelled by Catalog/Postcard Advertising Campaign "Touches"

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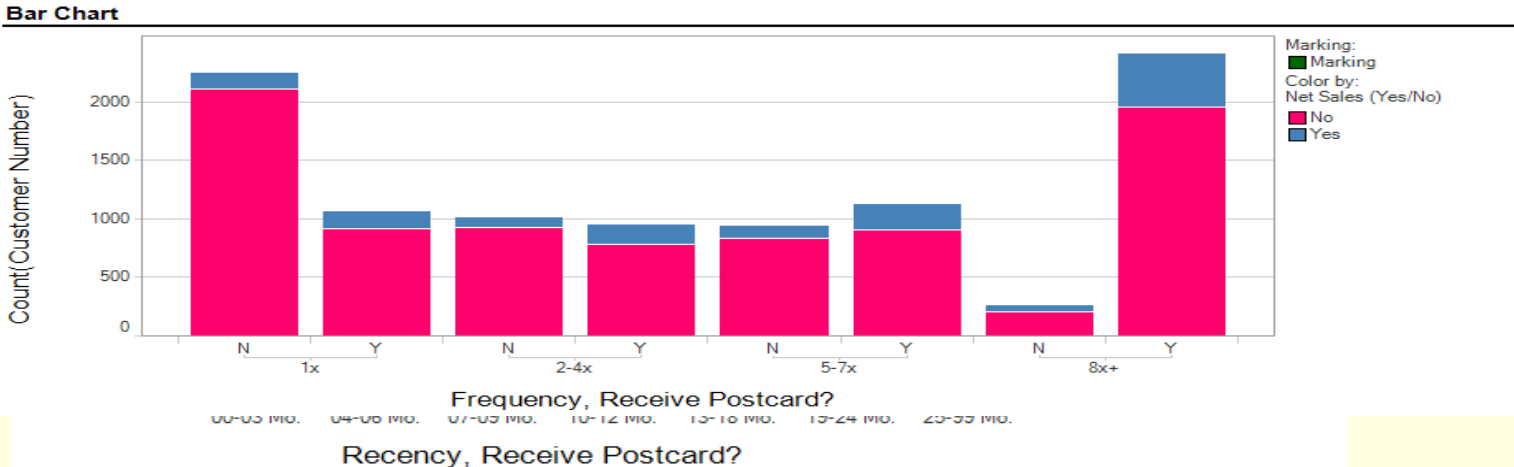
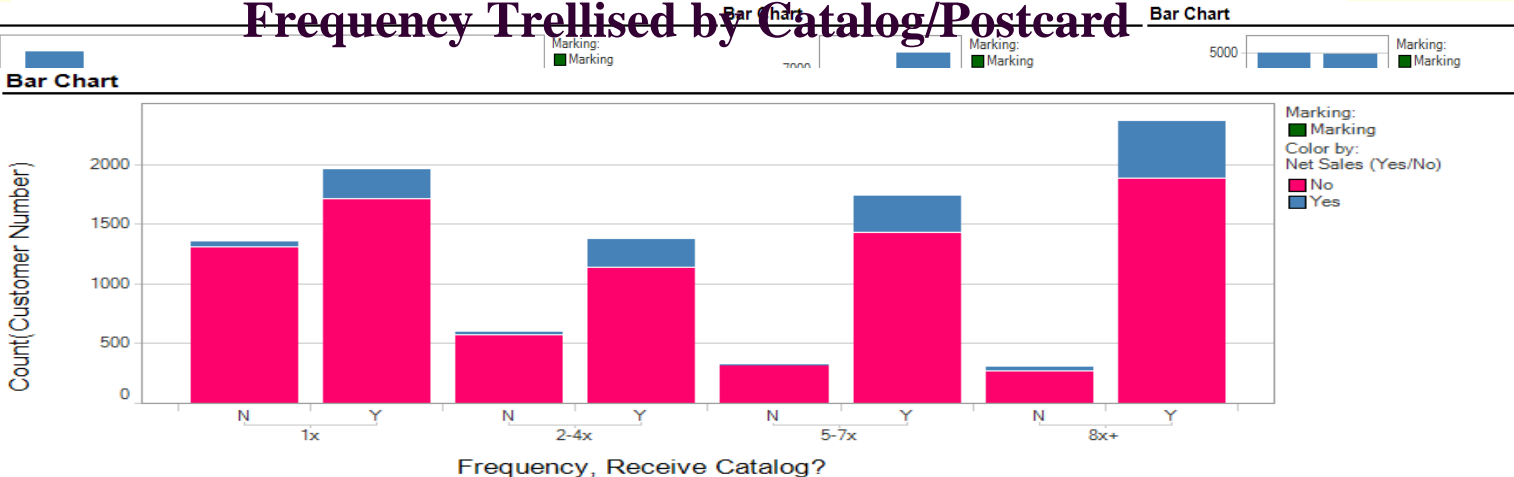
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# Modeling

- Oversampling
- Each modeling technique made a contribution
  - Cluster Analysis
  - Classification Trees
  - Logistic Regression
  - Discriminant Analysis
- Performance

Cut off Prob.Val. for Success (Updatable) **0.5**

Classification Confusion Matrix		
	Predicted Class	
Actual Class	1	0
1	973	383
0	1231	1483

Error Report			
Class	# Cases	# Errors	% Error
1	1356	383	28.24
0	2714	1231	45.36
<b>Overall</b>	<b>4070</b>	<b>1614</b>	<b>39.66</b>

Variables	Classification Function	
	1	0
Constant	-11.63763809	-10.43947792
Recency_04-06 Mo.	4.88352489	5.03142786
Recency_07-09 Mo.	5.72993994	6.11772013
Recency_10-12 Mo.	5.53590488	6.1128521
Recency_13-18 Mo.	13.45143223	13.891325
Recency_19-24 Mo.	15.7751503	16.13276291
Recency_25-99 Mo.	16.68216896	16.83932304
Frequency_2-4x	3.84875202	3.74452519
Frequency_5-7x	3.73601961	3.57422686
Frequency_8x+	2.57623243	2.33983088
Monetary_\$100 - \$199	3.0991044	3.02977943
Monetary_\$200+	1.00279856	0.62376088
Receive Catalog?_1	10.65406513	9.65767765
Receive Postcard?_1	5.20571852	4.84912825
E-Mail #1 Score_1	-0.48178485	-0.585733
E-Mail #2 Score_1	2.92032552	2.88010263

# Findings & Conclusions

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- Catalog and postcard were most effective
- Past behavior (i.e. monetary) also relevant
- Ad campaign targeted “best” segments
  - Autocorrelation made frequency and recency less relevant
- E-mails were statistically insignificant
  - However, marginal cost makes them effective
- Cost of misclassification vs marketing costs



Questions?

