

# Facebook Display Advertising Targeting Case



GBA 424 11B  
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# Key Takeaways

- GOAL: The goal is to evaluate which attributes constitute successful advertisements
- YES and NO (Predictive and regression analysis)
- MOBILE vs DESKTOP
- VERBS and WORDS and the impact they have.



# Analysis Methodology

- Regression model(Appendix) to predict score
- Threshold for score is 110%(1+10% require return)
- If predicted score > 110%, then marked as “Target”
- 192 observations are marked as “Target”
  - Find patterns



# Mobile Ads Draw More Attention



# Verbs Are More Persuasive

- Verbs make shorter sentence.
- Verbs draw immediate attention.
- Verbs are more persuasive.

what's  
see  
Share fresh  
become  
favorite now  
fan  
Click Like  
Retail Store page  
new looks  
stores  
Facebook  
Spring

Top choice example: **Click** “Like” to see what’s  
new in our stores for spring!!!



# Summary

- Criteria: minimal ROI equals to 10%
- Recommendations:
  - “Mobile-first” is turning into “Mobile-only”
  - Start with an actionable word in text! (Call-to-Action)
  - Other insights (Elderly group & E-commerce)



# Appendix - Regression Model

```
Call:
lm(formula = clickPerDollar ~ factor(category) * ageMean + factor(category) *
    factor(placement) + factor(adType) + factor(body), data = dataSet)

Residuals:
    Min       1Q   Median       3Q      Max
-40.551  -8.353   0.094   8.496  38.438

Coefficients:
(Intercept)
factor(category)Department
factor(category)eCom
factor(category)General
factor(category)High End
factor(category)Retailer
ageMean
factor(placement)mobile
factor(adType)Photo Post
factor(body)Click ""Like"" to become a fan of Retail Store X!
factor(body)Click ""Like"" to see what's new in our stores for Spring!!
factor(body)Need inspiration for your spring wardrobe? ""Like"" us for more!
factor(body)Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!
factor(body)What's your favorite Spring fashion trend? ""Like"" us and share!
factor(category)Department:ageMean
factor(category)eCom:ageMean
factor(category)General:ageMean
factor(category)High End:ageMean
factor(category)Retailer:ageMean
factor(category)Department:factor(placement)mobile
factor(category)eCom:factor(placement)mobile
factor(category)General:factor(placement)mobile
factor(category)High End:factor(placement)mobile
factor(category)Retailer:factor(placement)mobile
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 12.36 on 4473 degrees of freedom
Multiple R-squared:  0.7775,    Adjusted R-squared:  0.7764
F-statistic: 679.6 on 23 and 4473 DF,  p-value: < 2.2e-16
```

	Estimate	Std. Error	t value	Pr(> t )	
	23.94402	1.87293	12.784	< 2e-16	***
	-14.38562	2.55798	-5.624	1.98e-08	***
	8.77591	3.07533	2.854	0.004342	**
	-14.07956	3.48810	-4.036	5.52e-05	***
	-12.70919	2.51452	-5.054	4.49e-07	***
	-8.77847	2.51857	-3.486	0.000496	***
	0.17996	0.04438	4.055	5.11e-05	***
	20.89344	0.86028	24.287	< 2e-16	***
	6.13389	0.38712	15.845	< 2e-16	***
	36.54916	0.69735	52.411	< 2e-16	***
	36.79366	0.61789	59.547	< 2e-16	***
	-0.09308	0.62307	-0.149	0.881257	
	36.89808	0.62771	58.783	< 2e-16	***
	-1.03208	0.63688	-1.621	0.105190	
	0.36178	0.06238	5.800	7.09e-09	***
	-0.23352	0.07647	-3.054	0.002274	**
	0.19529	0.08426	2.318	0.020509	*
	0.14418	0.06127	2.353	0.018648	*
	0.31115	0.06132	5.074	4.05e-07	***
	-0.65790	1.20014	-0.548	0.583589	
	20.58824	1.46948	14.011	< 2e-16	***
	-1.00888	1.66035	-0.608	0.543462	
	-1.46465	1.16373	-1.259	0.208248	
	-0.73724	1.16366	-0.634	0.526406	

Residual standard error: 12.36 on 4473 degrees of freedom  
Multiple R-squared: 0.7775, Adjusted R-squared: 0.7764  
F-statistic: 679.6 on 23 and 4473 DF, p-value: < 2.2e-16



# Appendix - Partial Target Campaign

X	date	adType	category	placement	keywords	body	ageMean	Score	Extend	Y
15	3/26/13	Photo Post	Retailer	mobile	#Lucky Brand Jeans	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	44.5	1.1022869	Yes	
18	3/26/13	Photo Post	eCom	mobile	#Almay, #Clinique, #CoverGirl, #Maybelline, #Sephora, mac cosmetics	Click ""Like"" to see what's new in our stores for Spring!!	52	1.2577795	Yes	
37	3/26/13	Photo Post	Retailer	mobile	#American Eagle Outfitters	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	44.5	1.1022869	Yes	
49	3/26/13	Photo Post	eCom	mobile	#Lucky Brand Jeans	Click ""Like"" to become a fan of Retail Store X!	34.5	1.2654019	Yes	
52	3/26/13	Photo Post	Retailer	mobile	#Almay, #Clinique, #CoverGirl, #Maybelline, #Sephora, mac cosmetics	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	52	1.142803	Yes	
72	3/26/13	Photo Post	Retailer	mobile	#Shopping	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.1011383	Yes	
80	3/26/13	Photo Post	eCom	mobile	#Lululemon Athletica	Click ""Like"" to see what's new in our stores for Spring!!	27	1.2725109	Yes	
87	3/26/13	Photo Post	Retailer	mobile	#American Eagle Outfitters	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	44.5	1.1022869	Yes	
130	3/26/13	Photo Post	Retailer	mobile	#Shopping	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	44.5	1.1022869	Yes	
147	3/26/13	Photo Post	eCom	mobile	#Abercrombie & Fitch	Click ""Like"" to see what's new in our stores for Spring!!	52	1.2577795	Yes	
149	3/26/13	Photo Post	eCom	mobile	#American Eagle Outfitters	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	52	1.2589281	Yes	
161	3/26/13	Photo Post	Department	mobile	#American Eagle Outfitters	Click ""Like"" to see what's new in our stores for Spring!!	52	1.1098107	Yes	
163	3/26/13	Photo Post	Department	mobile	#American Eagle Outfitters	Click ""Like"" to see what's new in our stores for Spring!!	52	1.1098107	Yes	
171	3/26/13	Photo Post	Retailer	mobile	#Shopping	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	52	1.142803	Yes	
176	3/26/13	Photo Post	eCom	mobile	#Lucky Brand Jeans	Click ""Like"" to see what's new in our stores for Spring!!	27	1.2725109	Yes	
207	3/26/13	Photo Post	eCom	mobile	#Lucky Brand Jeans	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.2621989	Yes	
208	3/26/13	Photo Post	Retailer	mobile	#Lucky Brand Jeans	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.1011383	Yes	
255	3/26/13	Photo Post	Department	mobile	#Lululemon Athletica	Click ""Like"" to see what's new in our stores for Spring!!	52	1.1098107	Yes	
264	3/26/13	Photo Post	Retailer	mobile	#Lululemon Athletica	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.1011383	Yes	
314	3/26/13	Photo Post	Retailer	mobile	#American Eagle Outfitters	Click ""Like"" to become a fan of Retail Store X!	52	1.1389649	Yes	
315	3/26/13	Photo Post	Department	mobile	#American Eagle Outfitters	Click ""Like"" to become a fan of Retail Store X!	52	1.1071211	Yes	
382	3/26/13	Photo Post	eCom	mobile	#American Eagle Outfitters	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.2621989	Yes	
417	3/26/13	Photo Post	eCom	mobile	#Lucky Brand Jeans	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.2621989	Yes	
446	3/26/13	Photo Post	Retailer	mobile	#Lucky Brand Jeans	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	44.5	1.1022869	Yes	
473	3/26/13	Photo Post	Retailer	mobile	#Shopping	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.1011383	Yes	
476	3/26/13	Photo Post	eCom	mobile	#Lucky Brand Jeans	Click ""Like"" to see what's new in our stores for Spring!!	52	1.2577795	Yes	
496	3/26/13	Photo Post	eCom	mobile	#American Eagle Outfitters	Click ""Like"" to see what's new in our stores for Spring!!	27	1.2725109	Yes	
519	3/26/13	Photo Post	Department	mobile	#Lucky Brand Jeans	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	52	1.1109592	Yes	
546	3/26/13	Photo Post	Department	mobile	#Lucky Brand Jeans	Click ""Like"" to become a fan of Retail Store X!	52	1.1071211	Yes	
566	3/26/13	Photo Post	Retailer	mobile	#American Eagle Outfitters	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.1011383	Yes	
582	3/26/13	Photo Post	eCom	mobile	#American Eagle Outfitters	Click ""Like"" to become a fan of Retail Store X!	34.5	1.2654019	Yes	
652	3/26/13	Photo Post	Department	mobile	#Abercrombie & Fitch	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	52	1.1109592	Yes	
653	3/26/13	Photo Post	Department	mobile	#Abercrombie & Fitch	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	52	1.1109592	Yes	
705	3/26/13	Photo Post	Retailer	mobile	#Shopping	Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	52	1.142803	Yes	
723	3/26/13	Photo Post	eCom	mobile	#Shopping	Click ""Like"" to see what's new in our stores for Spring!!	27	1.2725109	Yes	
746	3/26/13	Photo Post	Retailer	mobile	#Abercrombie & Fitch	Click ""Like"" to see what's new in our stores for Spring!!	44.5	1.1011383	Yes	
749	3/26/13	Photo Post	eCom	mobile	#Lululemon Athletica	Click ""Like"" to see what's new in our stores for Spring!!	27	1.2725109	Yes	

