

# Lead Scoring Refresh

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# Agenda

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- About me
- Projects
- Lead Scoring
- Logit Model
- NCAA Demonstration
- Advantages
- Future Scope

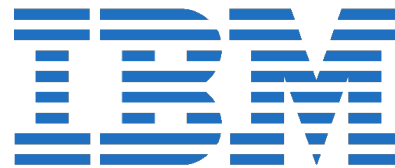


# About Me

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- Management Information Systems from Santa Clara University - Data Science and Machine Learning
- 7 Years in Sales and Product Management with IBM, Progress Software and Savvion
- Basketball, Weekend Camping, Travel, Robert Ludlum books.



# Projects

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- SQL – Loan Origination for a Bank
- Data Warehousing and Business Intelligence – Airplane Route Optimization
- Data Science with Python
  - Twitter Sentiment Analysis
  - Cleveland Cavaliers – Player Substitution Model
- Big Data – Movie recommendation system
- Machine Learning – Google maps image analysis

## **Gigamon**

- Sales Territory Management
  - Data Cleanup Dashboard
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# Lead Scoring

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Tracking and rating a prospects journey to analyze his propensity to purchase a product

- Marketing
  - Campaign
  - Inside Sales
- Sales
  - Customer ROI Calculation
  - Technical Steps to win
  - POC Success Factors

A process that spans across the entire customer sales lifecycle



# Factors that influence a Lead Score

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- Type of organization
  - Existing / New customer
  - Customer past spend
  - Customer size
- Type of customer
  - Designation
  - Authority
  - Meeting Feedback
- Customer Activity
  - Clicks
  - Time spent on page
  - Products viewed
  - Case studies viewed
  - Keywords searched
- Sales Stage
  - Customer maturity (Marketing Qualified, Sales Qualified)
  - Opportunity Stage

# Logit Model

TABLE 3.1: Current Use of Contraception Among Married Women  
by Age, Education and Desire for More Children  
Fiji Fertility Survey, 1975

Age	Education	Desires More Children?	Contraceptive Use		Total
			No	Yes	
<25	Lower	Yes	53	6	59
		No	10	4	14
	Upper	Yes	212	52	264
		No	50	10	60
25-29	Lower	Yes	60	14	74
		No	19	10	29
	Upper	Yes	155	54	209
		No	65	27	92
30-39	Lower	Yes	112	33	145
		No	77	80	157
	Upper	Yes	118	46	164
		No	68	78	146
40-49	Lower	Yes	35	6	41
		No	46	48	94
	Upper	Yes	8	8	16
		No	12	31	43
Total			1100	507	1607

$$y = \frac{e^{\beta'x}}{1 + e^{\beta'x}}$$

$$\beta'x = \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n$$

From: <http://data.princeton.edu/wws509/notes/c3.pdf>

# How we implement Logit (DEMO)

RStudio: Notebook Output													
No	NAME	GMS	PTS	REB	AST	TO	A.T	STL	BLK	PF	FG	FT	X3P
<dbl>	<fctr>	<int>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
1	NorthCarolina	6	84.2	41.5	17.8	12.8	1.39	6.7	3.8	16.7	0.514	0.664	0.417
2	Illinois	6	74.5	34.0	19.0	10.2	1.87	8.0	1.7	16.5	0.457	0.753	0.361
3	Louisville	5	77.4	35.4	13.6	11.0	1.24	5.4	4.2	16.6	0.479	0.702	0.376
4	MichiganState	5	80.8	37.8	13.0	12.6	1.03	8.4	2.4	19.8	0.445	0.783	0.329
5	Arizona	4	79.8	35.0	15.8	14.5	1.09	6.0	6.5	13.3	0.542	0.759	0.397
6	Kentucky	4	72.8	32.3	12.8	13.5	0.94	7.3	3.5	19.5	0.510	0.663	0.400
7	Wisconsin	4	68.8	31.0	13.0	11.3	1.16	3.8	0.8	14.0	0.467	0.753	0.429
8	WestVirginia	4	81.0	28.5	19.0	14.8	1.29	6.8	3.5	18.8	0.509	0.762	0.467
9	Duke	3	62.7	36.0	8.3	15.3	0.54	8.0	4.7	19.7	0.407	0.716	0.328
10	NorthCarolinaState	3	65.3	26.7	13.0	14.0	0.93	11.3	5.7	17.7	0.409	0.827	0.377
11	OklahomaState	3	75.3	29.0	16.0	13.0	1.23	8.0	0.3	17.7	0.483	0.827	0.476
12	Villanova	3	65.7	41.3	8.7	14.3	0.60	9.3	4.3	19.7	0.360	0.692	0.279
13	Utah	3	59.7	34.7	13.3	16.7	0.80	4.7	2.0	17.3	0.472	0.579	0.357
14	Washington	3	88.0	33.3	17.0	11.3	1.50	6.7	1.3	19.7	0.508	0.696	0.358
15	Wisconsin-Milwaukee	3	76.3	27.7	16.3	11.7	1.40	7.0	3.0	18.7	0.457	0.750	0.405
16	TexasTech	3	69.7	32.7	16.3	12.3	1.32	8.3	1.3	14.3	0.509	0.646	0.308
17	UAB	2	72.5	33.5	15.0	14.5	1.03	8.5	2.0	22.5	0.390	0.667	0.283
18	Connecticut	2	69.5	37.0	13.0	13.5	0.96	5.0	5.0	14.5	0.464	0.744	0.250
19	Florida	2	66.0	33.0	12.0	17.5	0.69	8.5	6.0	25.5	0.387	0.818	0.341
20	GeorgiaTech	2	67.0	32.0	11.0	12.0	0.92	8.5	1.5	21.5	0.440	0.781	0.406
21	IowaState	2	64.5	43.0	15.5	15.0	1.03	10.0	5.0	20.0	0.391	0.528	0.286
22	SouthernIllinois	2	71.0	30.5	13.0	10.5	1.24	8.0	1.0	25.0	0.410	0.818	0.323
23	BostonCollege	2	80.0	38.5	20.0	20.5	0.98	7.0	4.0	18.0	0.520	0.700	0.522
24	WakeForest	2	87.5	41.5	19.5	16.5	1.18	8.5	2.5	20.0	0.465	0.667	0.333
25	Oklahoma	2	71.0	40.5	9.5	10.5	0.90	8.5	3.0	19.0	0.393	0.794	0.156
26	Vermont	2	60.5	35.5	9.5	12.5	0.76	7.0	0.0	15.5	0.341	0.760	0.326
27	Pacific	2	79.0	33.0	14.0	10.0	1.40	3.0	1.0	18.0	0.459	0.700	0.409
28	MississippiState	2	74.0	39.0	11.0	9.5	1.16	5.0	5.5	19.0	0.437	0.660	0.433
29	Bucknell	2	63.0	29.5	15.0	9.5	1.58	7.0	1.5	22.5	0.429	0.767	0.283
30	Cincinnati	2	68.0	36.5	14.0	9.0	1.56	4.5	6.0	19.0	0.398	0.634	0.364
31	Gonzaga	2	71.5	42.0	13.5	11.5	1.17	3.5	3.0	15.5	0.463	0.600	0.241
32	Nevada	2	60.0	40.5	10.5	11.0	0.95	7.0	4.0	15.5	0.371	0.651	0.261
33	Oakland	2	73.5	32.5	13.0	13.5	0.96	5.5	1.0	15.0	0.470	0.684	0.433
34	Stanford	1	70.0	30.0	9.0	5.0	1.80	6.0	3.0	19.0	0.381	0.720	0.222
35	UCLA	1	66.0	27.0	16.0	13.0	1.23	5.0	2.0	15.0	0.433	0.533	0.300
36	GeorgeWashington	1	68.0	34.0	19.0	14.0	1.36	9.0	4.0	20.0	0.446	0.250	0.375
37	LSU	1	68.0	42.0	10.0	21.0	0.48	6.0	5.0	26.0	0.359	0.727	0.194
38	Minnesota	1	53.0	41.0	8.0	17.0	0.47	9.0	1.0	18.0	0.333	0.600	0.217

1-38 of 64 rows

Previous 1 2 Next

Context

List of 3

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List of 2

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List of 30



# Advantages

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- Recognizing patterns that may not necessarily be easy to interpret
- Decrease any error in human calculations
- Higher quality leads for Sales
- Assists in targeted marketing
- Optimizes the Marketing → Sales lead process (to a small extent)
- Data backed reasoning for lead qualification



# Version 2.0

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- Create a scoring on the past win / loss information
- Text Analytics – Sentiment Analysis
  - Survey Response
  - Email Threads
  - Meeting
  - Customer Support Information
- Data quality is important – Alerting mechanism for basic data quality violations



# Data Science in Marketing

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- Churn Prediction
  - Understanding rate of customer attrition
- Renewal Prediction
  - Analyze customer growth and past purchase trends
- Social Network – Mood Scoring
- Customer Classification
- Market Basket Analysis – Product Recommendation



Q/A

Thanks!

