

## The Teradata Center for Customer Relationship Management

### Cell2Cell: The Churn Game Database Documentation

Note: Variables whose description begins with "Mean" are averages calculated over the four months previously to observing churn.

Position	Variable Name	Variable Description	N	Minimum	Maximum	Mean	Standard Deviation
	1 revenue	Mean monthly revenue	70831	-6.1675	1223.38	58.852803	44.24358324
	2 mou	Mean monthly minutes of use	70831	0	7667.75	525.72839	530.1342588
	3 recchrg	Mean total recurring charge	70831	-11.29	399.99	46.876304	23.91509477
	4 directas	Mean number of director assisted calls	70831	0	159.39	0.8940274	2.19770883
	5 overage	Mean overage minutes of use	70831	0	4320.75	40.095361	96.34710282
	6 roam	Mean number of roaming calls	70831	0	1112.4475	1.2210712	9.08108861
	7 changem	% Change in minutes of use	70545	-3875	5192.25	-10.84646	255.3143148
	8 changer	% Change in revenues	70545	-1107.74	2483.4825	-1.205634	38.77029226
	9 dropvce	Mean number of dropped voice calls	71047	0	221.66667	6.0099676	9.006124595
	10 blkvce	Mean number of blocked voice calls	71047	0	384.33333	4.067833	10.67078555
	11 unansvce	Mean number of unanswered voice calls	71047	0	848.66667	28.355903	38.90424823
	12 custcare	Mean number of customer care calls	71047	0	365.66667	1.8659174	5.160761938
	13 threeway	Mean number of threeway calls	71047	0	66	0.3001675	1.161560303
	14 mourec	Mean unrounded mou received voice calls	71047	0	3287.25	114.93533	166.3057292
	15 outcalls	Mean number of outbound voice calls	71047	0	644.33333	25.396526	35.14751212
	16 incalls	Mean number of inbound voice calls	71047	0	519.33333	8.1767985	16.51905923
	17 peakvce	Mean number of in and out peak voice calls	71047	0	2090.6667	90.580946	104.9148661
	18 opeakvce	Mean number of in and out off-peak voice calls	71047	0	1572.6667	67.818418	93.32899044
	19 dropblk	Mean number of dropped or blocked calls	71047	0	489.66667	10.149744	15.46058152
	20 callfwdv	Mean number of call forwarding calls	71047	0	81.333333	0.0118372	0.562186873
	21 callwait	Mean number of call waiting calls	71047	0	212.66667	1.8530339	5.556201766
	22 churn	Churn between 31-60 days after obs_date	71047	0	1	0.2900756	0.453800218
	23 months	Months in Service	71047	6	61	18.750827	9.787568466
	24 uniqsubs	Number of Uniq Subs	71047	1	196	1.5295509	1.131774041
	25 actvsubs	Number of Active Subs	71047	0	53	1.3516545	0.66004932
	26 csa	Communications Service Area	71047	Character string variable			
	27 phones	# Handsets Issued	71046	1	28	1.808617	1.33612025
	28 models	# Models Issued	71046	1	16	1.561791	0.908280483
	29 eqpdays	Number of days of the current equipment	71046	-5	1823	380.26563	254.2946923
	30 customer	Customer ID	71047	1000001	1099999	1050487.5	29199.11481
	31 age1	Age of first HH member	69803	0	99	31.375113	22.08219498
	32 age2	Age of second HH member	69803	0	99	21.157715	23.91758552
	33 children	Presence of children in HH	71047	0	1	0.2423888	0.428531301
	34 credita	Highest credit rating - a	71047	0	1	0.1676637	0.373569968
	35 creditaa	High credit rating - aa	71047	0	1	0.3708812	0.48304413
	36 creditb	Good credit rating - b	71047	0	1	0.1645249	0.370753809

37	creditc	Medium credit rating - c	71047	0	1	0.1044379	0.305829932
38	creditde	Low credit rating - de	71047	0	1	0.1284783	0.334624006
39	credityy	Very low credit rating - gy	71047	0	1	0.022647	0.148776362
40	creditiz	Lowest credit rating - z	71047	0	1	0.041367	0.19913893
41	prizmrur	Prizm code is rural	71047	0	1	0.047743	0.213223557
42	prizmub	Prizm code is suburban	71047	0	1	0.3211114	0.466906767
43	prizmtwn	Prizm code is town	71047	0	1	0.1484229	0.355521173
44	refurb	Handset is refurbished	71047	0	1	0.1396118	0.346586267
45	webcap	Handset is web capable	71047	0	1	0.9028108	0.296217289
46	truck	Subscriber owns a truck	71047	0	1	0.1872141	0.390086043
47	rv	Subscriber owns a recreational vehicle	71047	0	1	0.0811998	0.273143583
48	occprof	Occupation - professional	71047	0	1	0.173899	0.379025249
49	occcler	Occupation - clerical	71047	0	1	0.0200571	0.140196765
50	occrcft	Occupation - crafts	71047	0	1	0.0296423	0.16959978
51	occstud	Occupation - student	71047	0	1	0.0075725	0.086690344
52	occhmkr	Occupation - homemaker	71047	0	1	0.0031528	0.056061986
53	occrcet	Occupation - retired	71047	0	1	0.0145115	0.119587364
54	occself	Occupation - self-employed	71047	0	1	0.0178333	0.132346086
55	ownrent	Home ownership is missing	71047	0	1	0.3319211	0.470906161
56	marryun	Marital status unknown	71047	0	1	0.3848157	0.486555142
57	marryyes	Married	71047	0	1	0.3653778	0.481539344
58	marryno	Not Married	71047	0	1	0.2498065	0.432903954
59	mailord	Buys via mail order	71047	0	1	0.3619717	0.480574059
60	mailres	Responds to mail offers	71047	0	1	0.377201	0.484689296
61	mailflag	Has chosen not to be solicited by mail	71047	0	1	0.014413	0.119186659
62	travel	Has traveled to non-US country	71047	0	1	0.0574831	0.232764974
63	pcown	Owns a personal computer	71047	0	1	0.1854125	0.388634551
64	creditcd	Possesses a credit card	71047	0	1	0.6764255	0.467843068
65	retcalls	Number of calls previously made to retention team	71047	0	4	0.0370037	0.20582259
66	retacct	Number of previous retention offers accepted	71047	0	4	0.0179177	0.14148458
67	newcelly	Known to be a new cell phone user	71047	0	1	0.1929427	0.394611209
68	newcelln	Known not to be a new cell phone user	71047	0	1	0.1387814	0.345720673
69	refer	Number of referrals made by subscriber	71047	0	35	0.0508537	0.290443694
70	incmiss	Income data is missing	71047	0	1	0.2498346	0.432920222
71	income	Income (0=>missing)	71047	0	9	4.3342295	3.137063069
72	mcycle	Owns a motorcycle	71047	0	1	0.0134559	0.115217218
73	creditad	Number of adjustments made to customer credit rating (up or down)	71047	0	25	0.053162	0.374988053
74	setprcm	Missing data on handset price	71047	0	1	0.5665123	0.495559854
75	setprc	Handset price (0=>missing)	71047	0	499.98999	35.79858	57.04096076
76	retcall	Customer has made made call to retention team	71047	0	1	0.0340338	0.181317322
77	calibrat	Calibration sample = 1; Validation sample = 0;	71047	0	1	0.5630076	0.496017648
78	churndep	Churn (=missing for validation sample)	40000	0	1	0.5	0.50000625

## at Duke University

### Notes

The recurring charge is the basic rate for the customer's calling plan.

Overage represents calls or minutes of use over the number of minutes allowed by that customer's calling plan.

Customer Care handles customer calls regarding complaints, questions, etc.

1=> the customer churned; 0=> the customer did not churn.

# of months the customer has had service.

Number of individuals listed with the account.

Number of individuals listed with the account who actively use the service.

Location of the customer within the US.

Prizm data classifies the customer's location by rural, suburban, or town.

The retention team handles calls from customers considering whether to renew, reporting competitive offers, etc.  
Retention team may make a retention offer to encourage customer to stay.

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The retention team handles calls from customers considering whether to renew, reporting competitive offers, etc.  
Indicator of whether customer is in calibration or validation sample.  
Churn variable to use as dependent variable for logistic regression.