



# INSTITUTO TECNOLÓGICO DE CULIACÁN

## **Unidad 3:**

Minería de datos

## **MATERIA:**

Temas Selectos de Base de Datos

## **ACTIVIDAD:**

Practica 1 Comparativa de algoritmos  
de Minería

## **CARRERA:**

Ingeniería en Sistemas Computacionales

## **MAESTRO:**

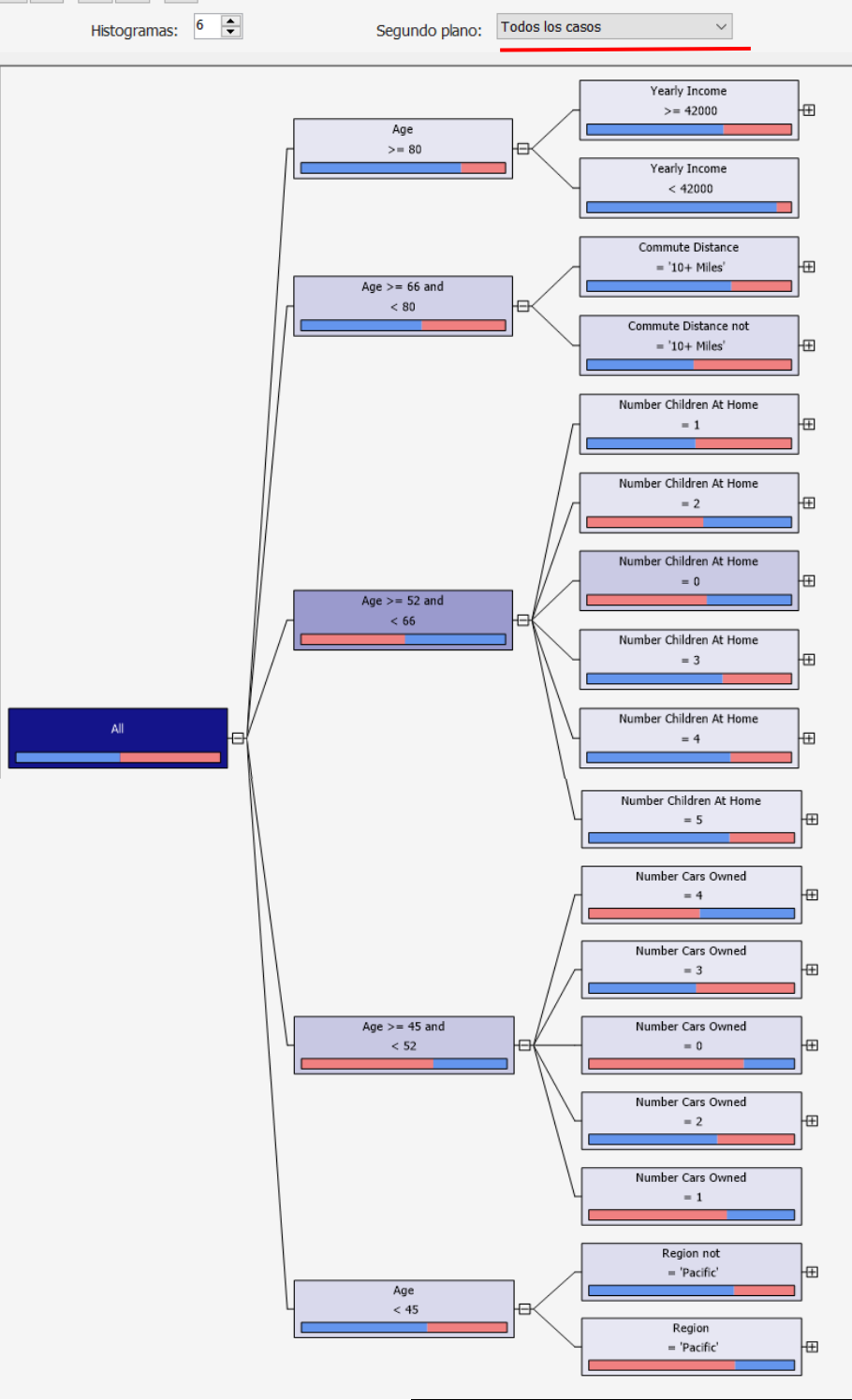
MC.Daniel Esparza Soto

## **INTEGRANTES EQUIPO:**

Castro Cruz Luis Daniel

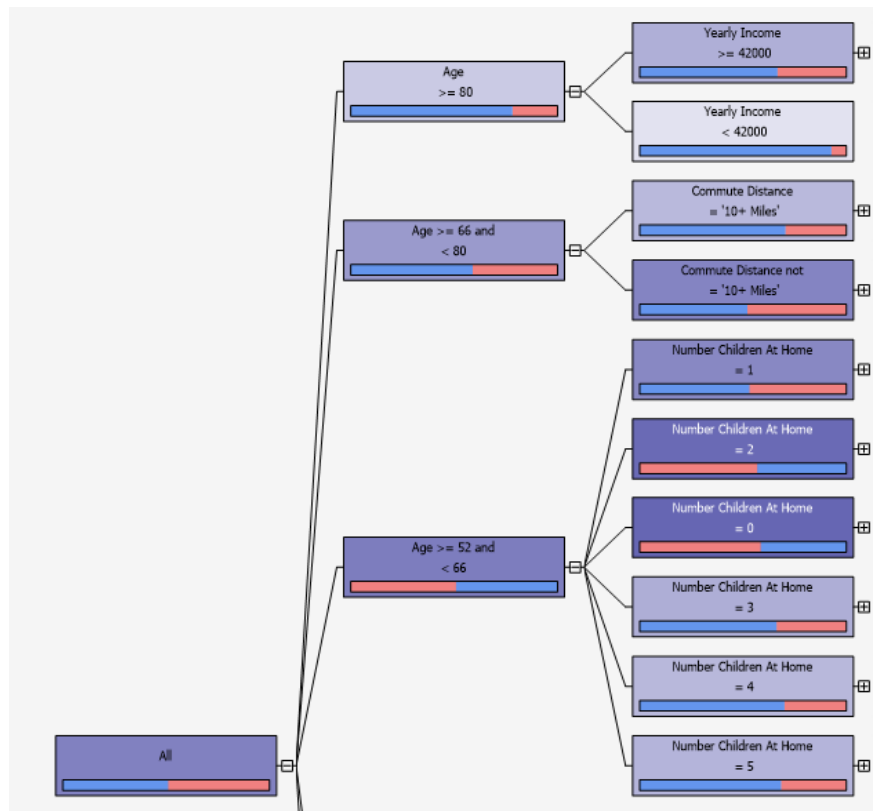
Felix Fierro Ryan Guadalupe

Flores Mascareño America Citlaly



**ÁRBOL DE DECISIÓN**  
(Todos los casos)

Árbol de decisión		
Arbol de decisión (1)	Arbol de decisión (0)	Arbol de decisión/RedDependencias
Age > = 45 and < 52	Age >= 80	Age
Number Cars Owner 0	Yearly income < 42000	Region
Age > = 49		Number Children At Home
Total children = 0		Number Cars Owned
Commute Distance = "0-1 miles"		Yearly income
		Marital Status
		Commute Distance
		English Ocupation
		English Education
		English Education
		House owner Flag



## ÁRBOL DE DECISIÓN (1)

### Árbol de decisión (1)

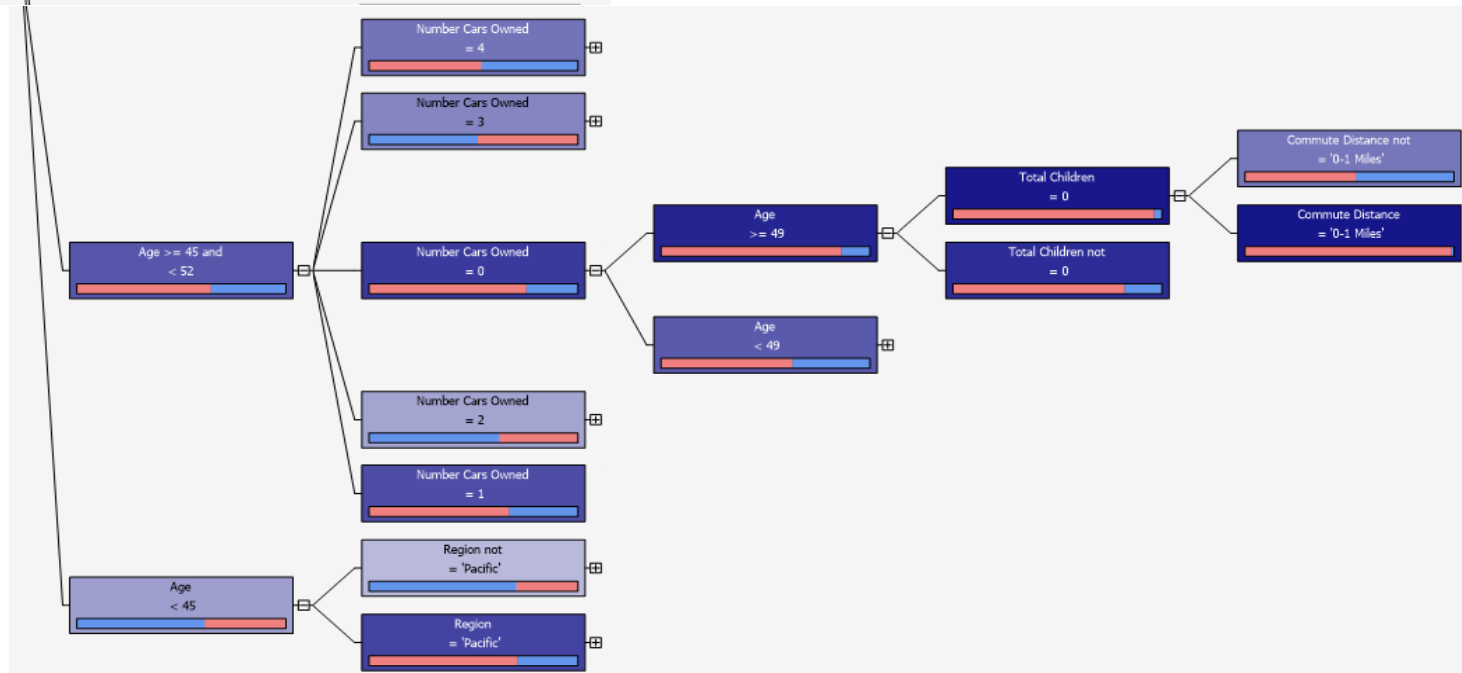
Age > = 45 and < 52

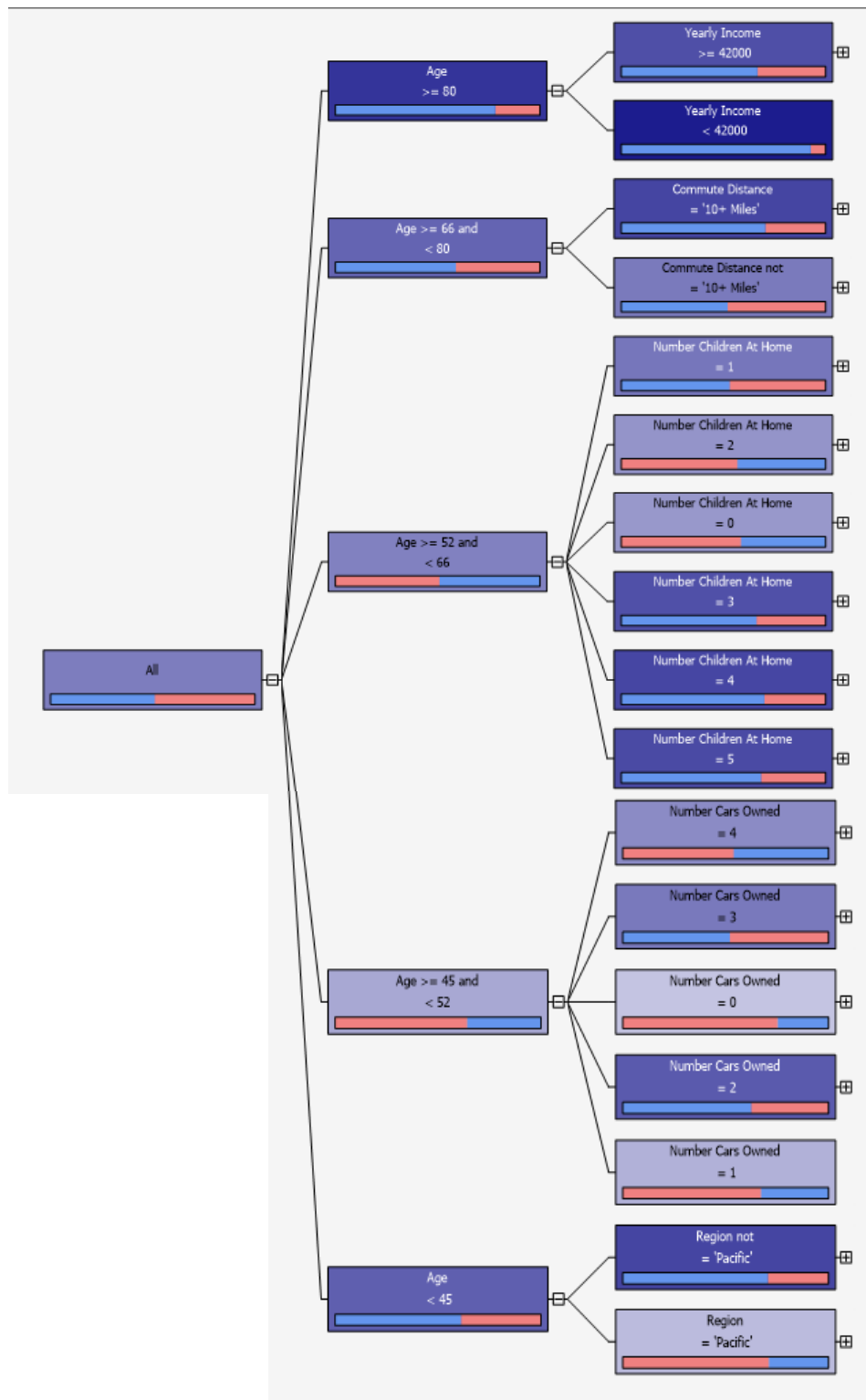
Number Cars Owner 0

Age > = 49

Total children = 0

Commute Distance = "0-1 miles"





## ÁRBOL DE DECISIÓN (0)

### Arbol de decisión (0)

Age >= 80

Yearly income < 42000

Arbol de decisión/RedDependencias
Age
Region
Number Children At Home
Number Cars Owned
Yearly income
Marital Status
Commute Distance
English Ocupation
English Education
English Education
House owner Flag

## ÁRBOL DE DECISIÓN / RED DEPENDENCIAS

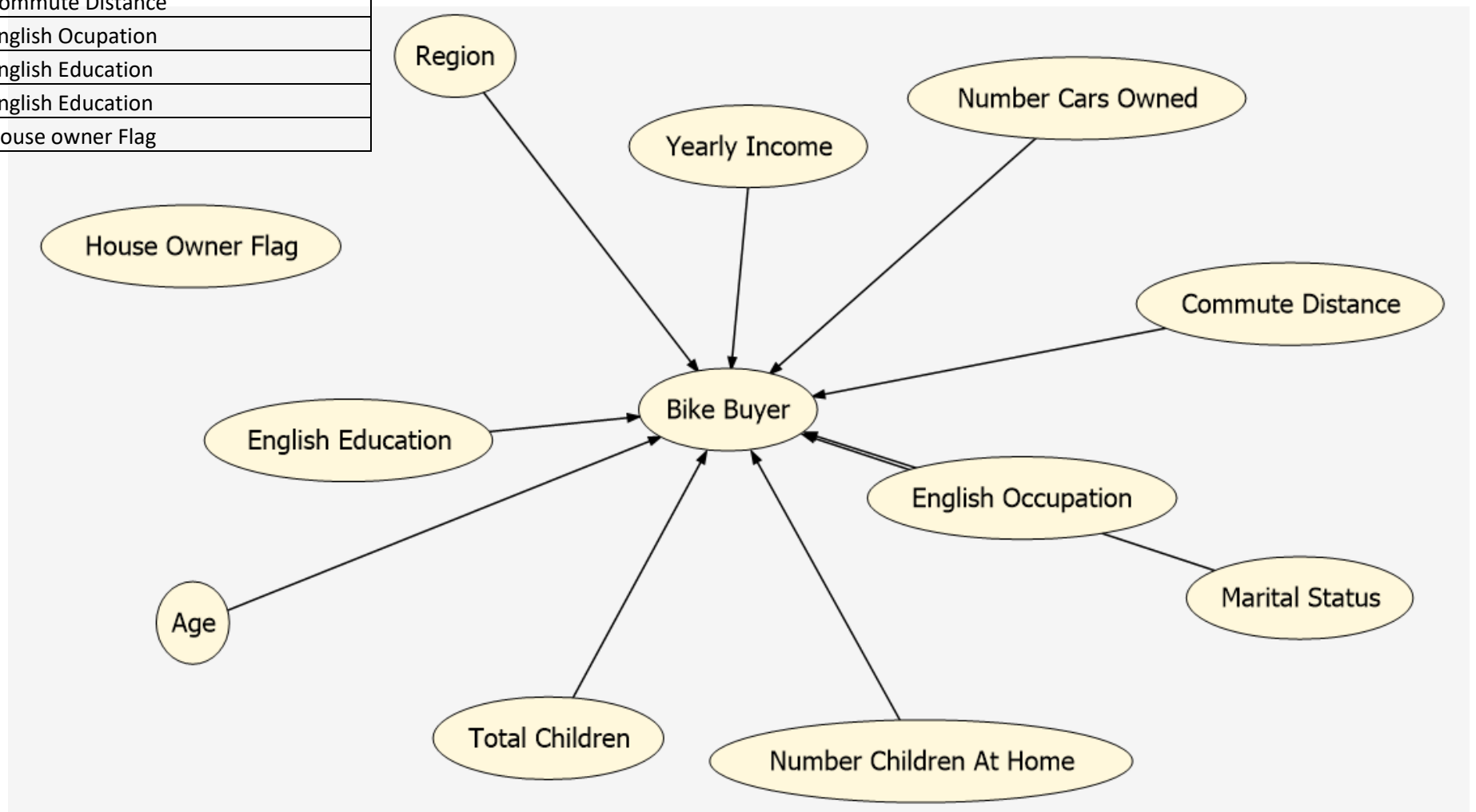
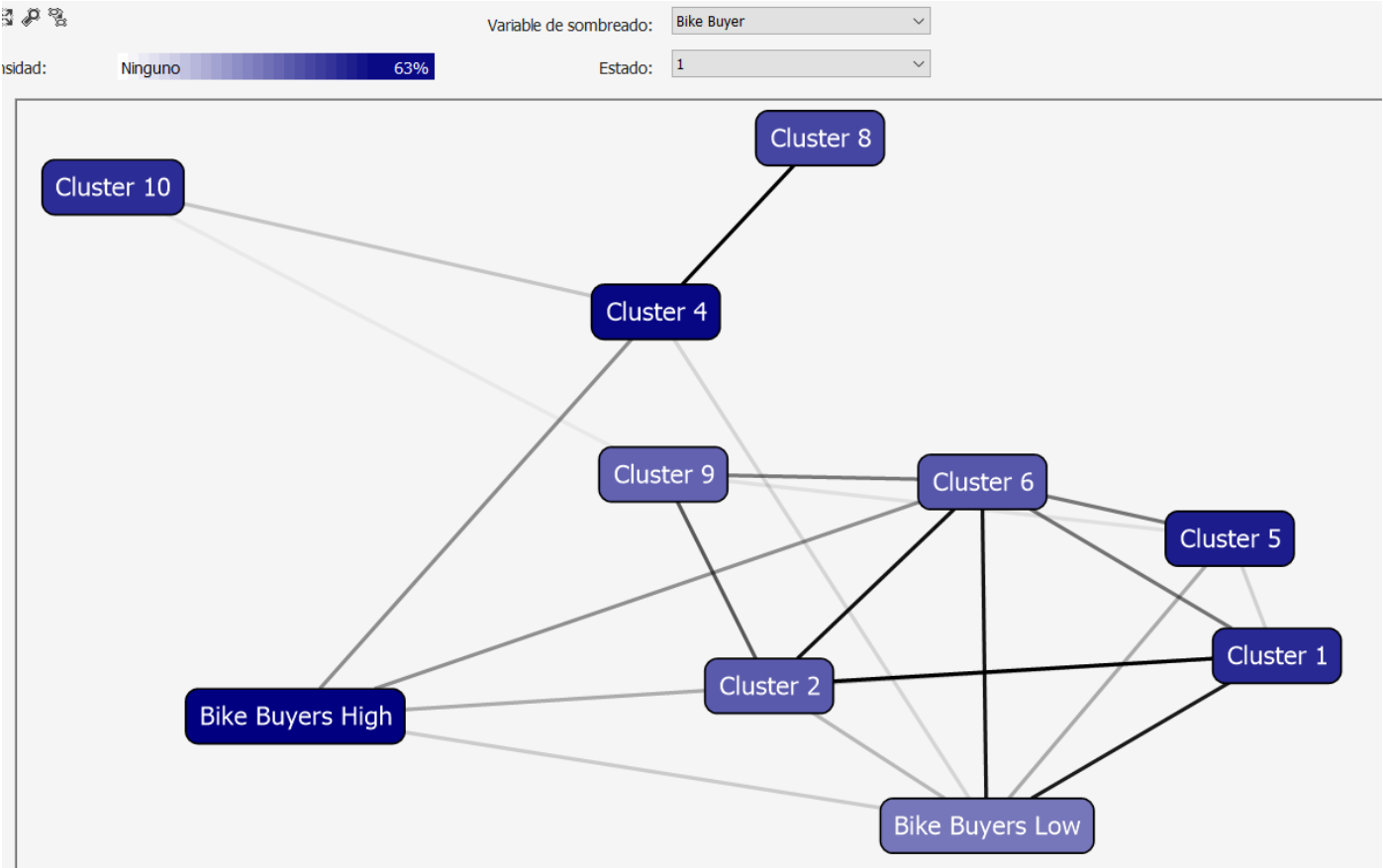


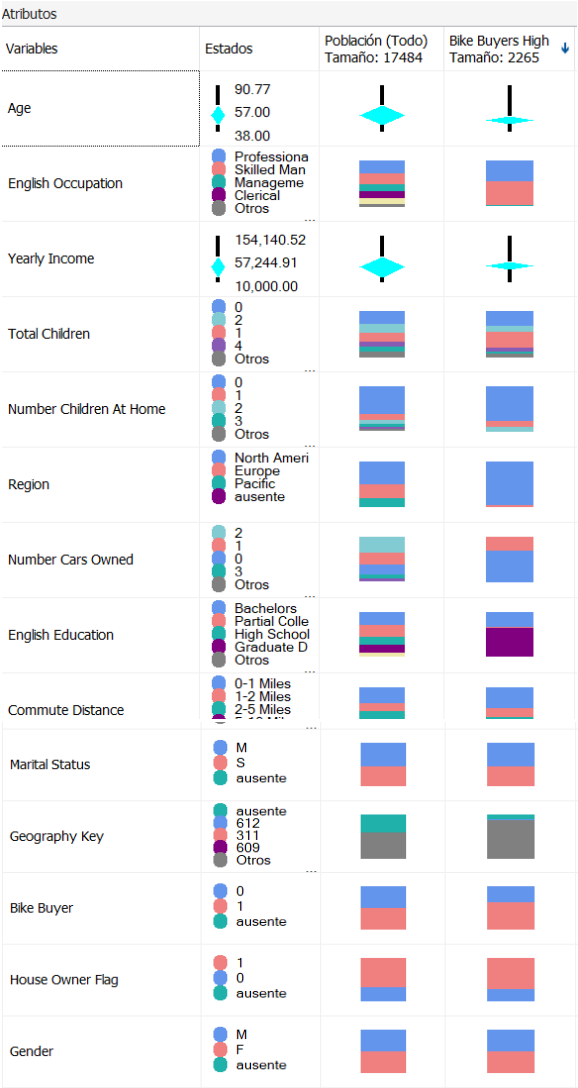
DIAGRAMA DE CLÚSTER

Cluster			
Perfil de cluster: Bike Buyer High	Perfil de cluster: Bike Buyer Low	Características de cluster: Bike Buyer High	Características de cluster: Bike Buyer Low
Age	Region	Region North America	Region: North America
English Occupation	Age	Number Children At Home: 0	Age: 38 - 49
Yearly Income	English Education	House owner Flag: 1	Number Children At Home: 0
Total children	Number Cars Owner	Number Cars Owner: 0	Total children: 0
Number Children At Home	Yearly Income	English Education: Graduate Degree	Number Cars Owner: 2
Region	English Occupation	Bike Buyer: 1	English Occupation: Skilled Manual
Number Cars Owned	Commute Distance	Age: 50 -56	Bike Buyer: 0
English education	Number Children At Home	Marital Status: M	Marital Status: S
Commute Distance	Bike Buyer	English Occupation: Skilled Manual	Yearly income: 35,459.9 - 57,244.9
Marital Status	Total Children	Yearly income: 57,244.9 - 79,029.9	Commute Distance: 5-10 miles
Geography key	Geography Key	Gender: F	House owner Flag: 1
Bike Buyer	House owner Flag	Gender: M	English Education: Partial College
House Owner Flag	Marital Status	Marital Status: S	Gender: M
Gender	Gender		Gender: F



Perfiles de Cluster

Perfil de cluster: Bike Buyer High	Perfil de cluster: Bike Buyer Low
Age	Region
English Ocupation	Age
Yearly Income	English Education
Total children	Number Cars Owner
Number Children At Home	Yearly Income
Region	English Ocupation
Number Cars Owned	Commute Distance
English education	Number Children At Home
Commute Distance	Bike Buyer
Marital Status	Total Children
Geography key	Geography Key
Bike Buyer	House owner Flag
House Owner Flag	Marital Status
Gender	Gender



## Características de Cluster

Características de cluster: Bike Buyer High	Características de cluster: Bike Buyer Low
Region North America	Region: North America
Number Children At Home: 0	Age: 38 - 49
House owner Flag: 1	Number Children At Home: 0
Number Cars Owner: 0	Total children: 0
English Education: Graduate Degree	Number Cars Owner: 2
Bike Buyer: 1	English Occupation: Skilled Manual
Age: 50 -56	Bike Buyer: 0
Marital Status: M	Marital Status: S
English Occupation: Skilled Manual	Yearly income: 35,459.9 - 57,244.9
Yearly income: 57,244.9 - 79,029.9	Commute Distance: 5-10 miles
Gender: F	House owner Flag: 1
Gender: M	English Education: Partial College
Marital Status: S	Gender: M
	Gender: F

Clúster: <span>Bike Buyers High</span>		
Características para Bike Buyers High		
Variables	Valores	Probabilidad
Region	North America	
Number Children At Home	0	
House Owner Flag	1	
Number Cars Owned	0	
English Education	Graduate Degree	
Bike Buyer	1	
Age	50 - 56	
Marital Status	M	
English Occupation	Skilled Manual	
Yearly Income	57,244.9 - 79,029.9	
Gender	F	
Gender	M	
Marital Status	S	
Commute Distance	0-1 Miles	

Clúster: <span>Bike Buyers Low</span>		
Características para Bike Buyers Low		
Variables	Valores	Probabilidad
Region	North America	
Age	38 - 49	
Number Children At Home	0	
Total Children	0	
Number Cars Owned	2	
English Occupation	Skilled Manual	
Bike Buyer	0	
Marital Status	S	
Yearly Income	35,459.9 - 57,244.9	
Commute Distance	5-10 Miles	
House Owner Flag	1	
English Education	Partial College	
Gender	M	
Gender	F	



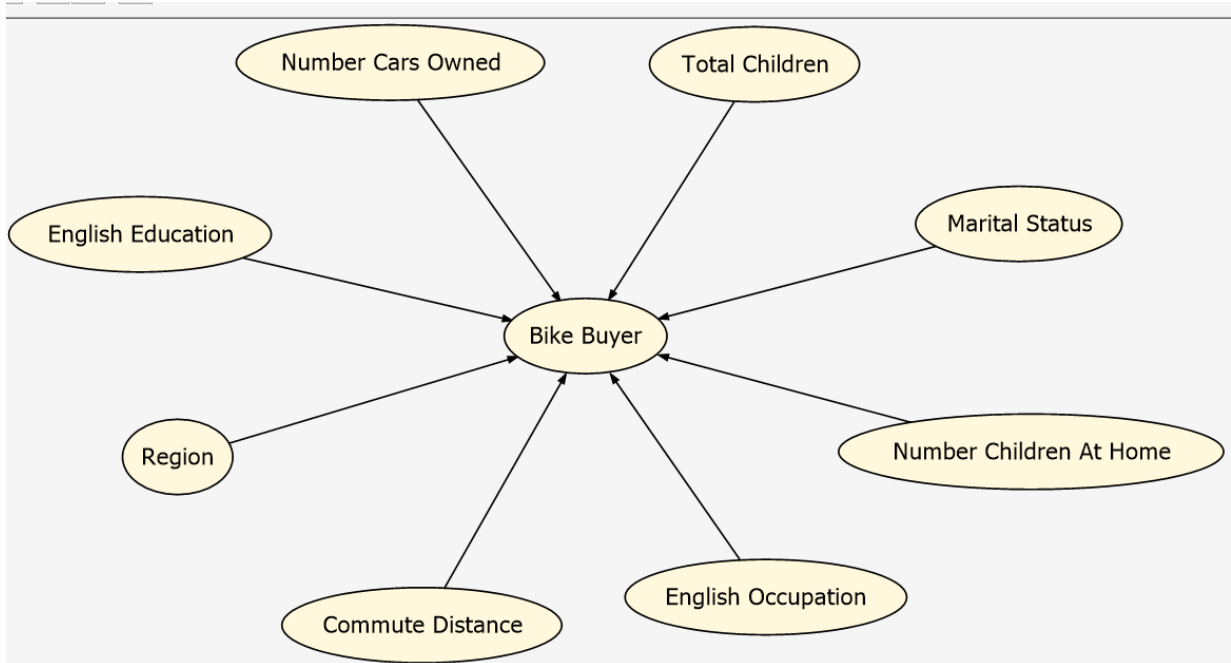
Ficha distinción del clúster

Clúster 1: Bike Buyers High		Clúster 2: Bike Buyers Low	
Puntuaciones de distinción para Bike Buyers High y Bike Buyers Low			
Variables	Valores	Favorece Bike Buyer...	Favorece Bike Buyer...
Number Cars Owned	2		
Age	38 - 45		
Age	46 - 108		
Number Cars Owned	0		
English Education	Graduate Degree		
Commute Distance	5-10 Miles		
Total Children	0		
English Education	Partial College		
English Education	High School		
Total Children	1		
Commute Distance	2-5 Miles		
English Education	Bachelors		
Yearly Income	46,922.6 - 170,000.0		
Yearly Income	10,000.0 - 46,922.6		
English Occupation	Professional		
English Occupation	Clerical		
Commute Distance	0-1 Miles		
Total Children	2		
Number Children At Home	1		
Bike Buyer	0		
Bike Buyer	1		
English Education	Partial High School		
Number Children At Home	2		
Number Children At Home	0		
English Occupation	Skilled Manual		
Number Children At Home	3		
Total Children	4		
Region	Europe		

## Modelo Bayes Naive

Bayes Naive		
Red de dependencias	Perfil de atributo	Característica del atributo: si compraron
Number Cars Owner	Number Cars Owner	Number Children At Home 0
Commute Distance	Commute Distance	Marital Status M
Total children	Region	Marital Status S
English Education	English Education	Region NA
Number Children At Home	Total children	Commute Distance 0-1 miles
Region	Marital Status	English Ocupation Bacherol
Marital Status	Number Children At Home	English Ocupation Professional
English Ocupation	English Ocupation	Region Europe
		Number Cars Owner 0
		Number Cars Owner 1
		Total children 0
		Number Cars Owner 2
		English Education Partial College

## Red de Dependencias



Perfil de atributo

Perfil de atributo
Number Cars Owner
Commute Distance
Region
English Education
Total children
Marital Status
Number Children At Home
English Ocupation



Características del atributo: Sí compraron

Característica del atributo: si compraron
Number Children At Home: 0
Marital Status: M
Marital Status: S
Region: North America
Commute Distance: 0-1 miles
English Ocupation: Bachelors
English Ocupation: Professional
Region: Europe
Number Cars Owner: 0
Number Cars Owner: 1
Total children: 0
Number Cars Owner: 2
English Education: Partial College

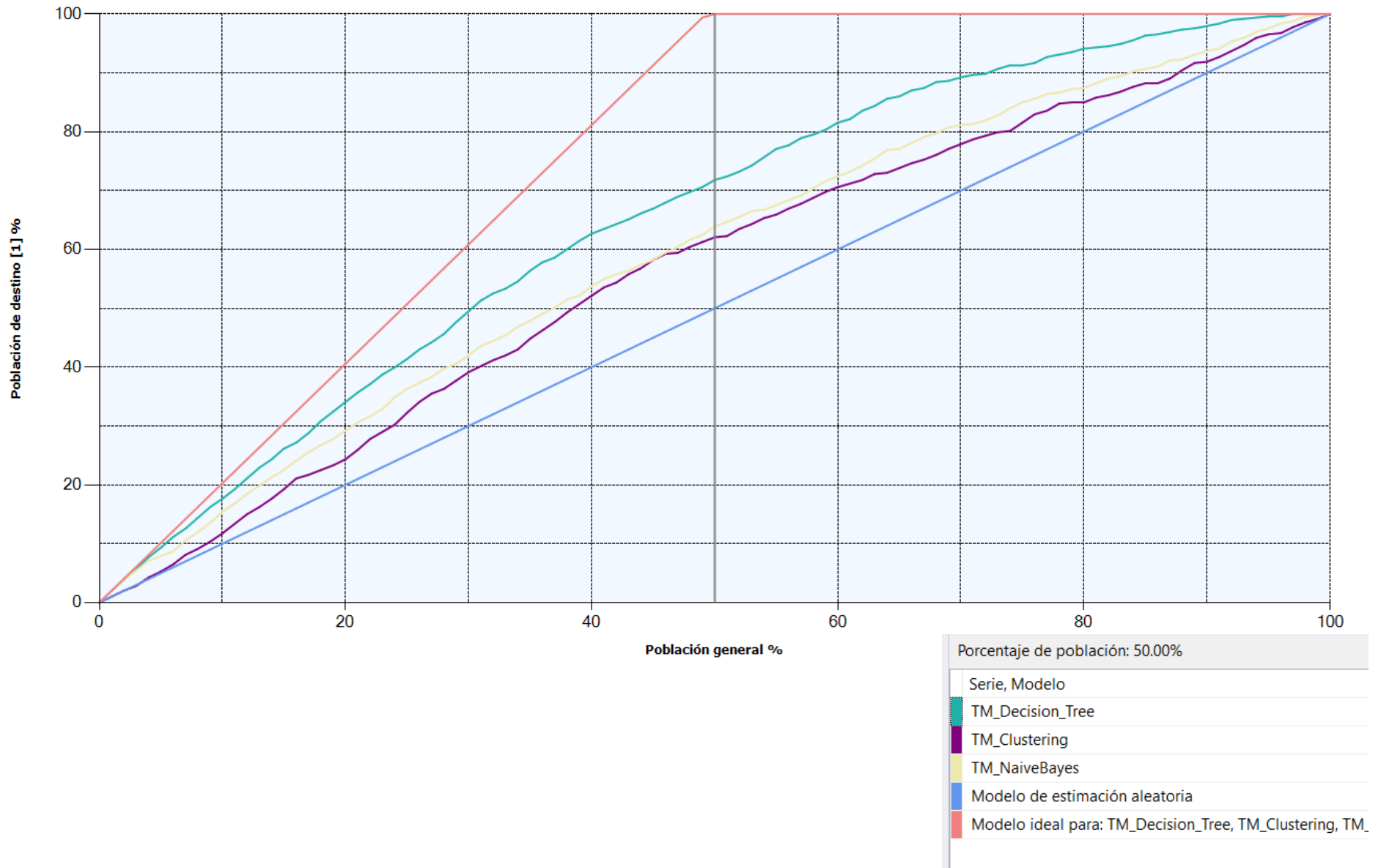


## Distinción del atributo

Red de dependencias			
Perfiles del atributo			
Características del atributo			
Distinción del atributo			
<div> Atributo: <span>Bike Buyer</span> Valor 1: <span>0</span> Valor 2: <span>Todos los otros estados</span> </div>			
Puntuaciones de distinción para 0 y Todos los otros estados			
Atributos	Valores	Favorece 0	Favorece Todos los ...
Number Cars Owned	0		<div></div>
Number Cars Owned	2	<div></div>	
English Education	Partial High School	<div></div>	
Total Children	1		<div></div>
Commute Distance	10+ Miles	<div></div>	
Total Children	5	<div></div>	
Region	Pacific		<div></div>
Commute Distance	0-1 Miles		<div></div>
Number Children At Home	4	<div></div>	
Region	North America	<div></div>	
English Education	Bachelors		<div></div>
Total Children	4	<div></div>	
Commute Distance	5-10 Miles	<div></div>	
Number Children At Home	3	<div></div>	
Commute Distance	2-5 Miles		<div></div>
Number Children At Home	2		<div></div>
English Education	High School	<div></div>	
Number Cars Owned	4	<div></div>	
Number Cars Owned	1		<div></div>
Marital Status	M	<div></div>	
Marital Status	S		<div></div>
English Occupation	Clerical		<div></div>
Number Children At Home	0		<div></div>
English Occupation	Manual	<div></div>	
Number Cars Owned	3	<div></div>	
English Education	Graduate Degree		<div></div>
Number Children At Home	5	<div></div>	

## GRAFICA DE ELEVACIÓN

Gráfico de elevación de minería de datos para estructura de minería de datos: Targeted Mailing

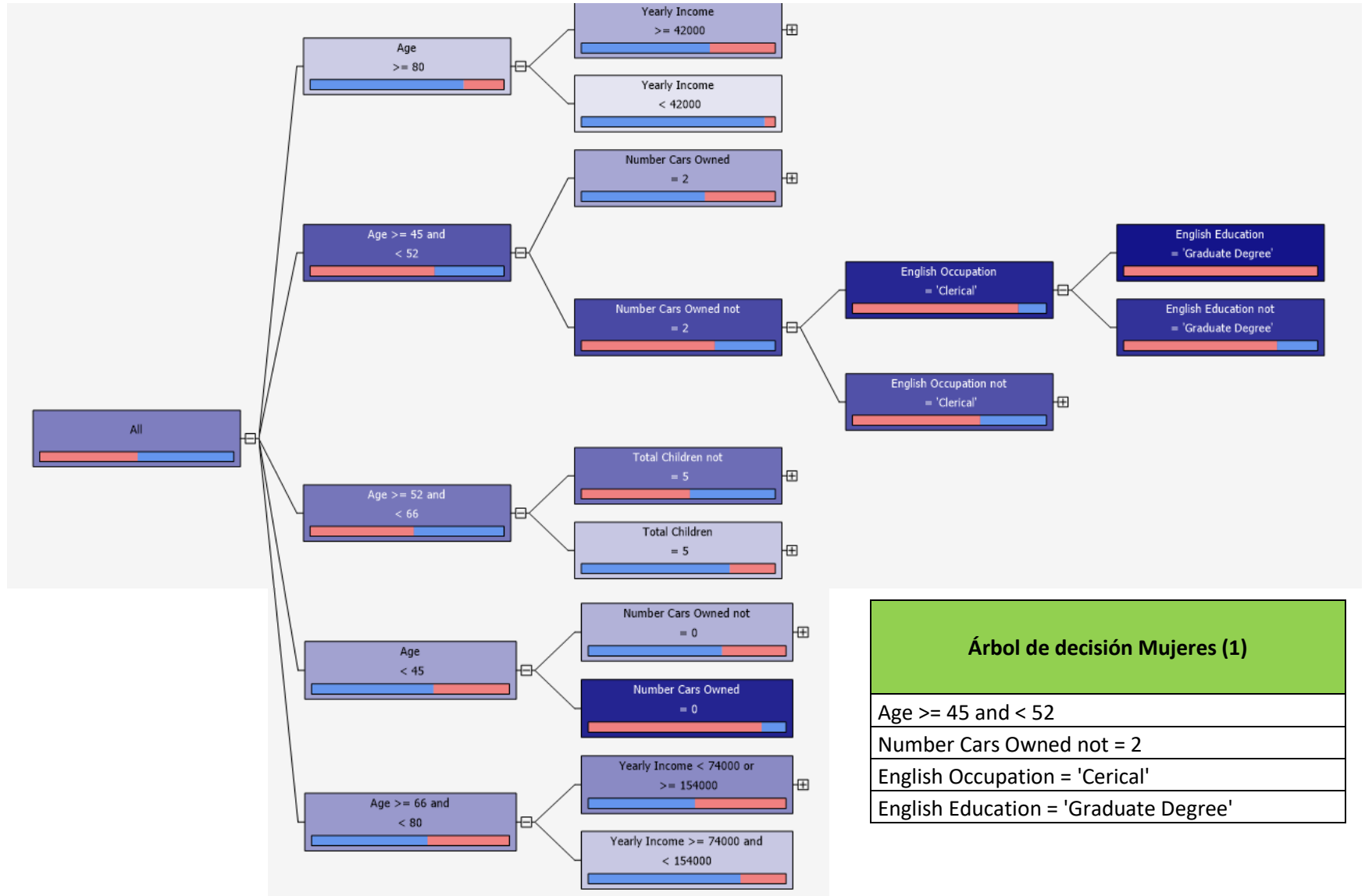


## PROBANDO UN MODELO DE FILTRADO

### Árbol de decisión Male/Female

Arbol de decisión					
Arbol de decisión Hombres (0)	Arbol de decisión Hombres (1)	Arbol de decisión Mujeres (0)	Arbol de decisión Mujeres (1)	Arbol de decisión/RedDependencias Hombres	Arbol de decisión/RedDependencias Mujeres
Age >=80	Age >= 45 and < 52	Age >= 80	Age >= 45 and < 52	Age	Age
Yearly Income < 5800	Number Cars Owned not = 2	Yearly Income < 4200	Number Cars Owned not = 2	Region	Numbers Cars Owned
	English Occupation = 'Clerical'		English Occupation = 'Clerical'	Number Children At Home	Total Children
	Number Cars Owned = 0		English Education = 'Graduate Degree'	Yearly Income	Yearly Income
	Total Children = 0			Number Cars Owned	Commute Distance
				English Occupation	Number Children at Home
				Commute Distance	English Occupation
				Marital Status	English Education
				Total Children	Region
				English Education	Marital Status

## ÁRBOL DE DECISIÓN FEMALE (1)



### Árbol de decisión Mujeres (1)

Age >= 45 and < 52

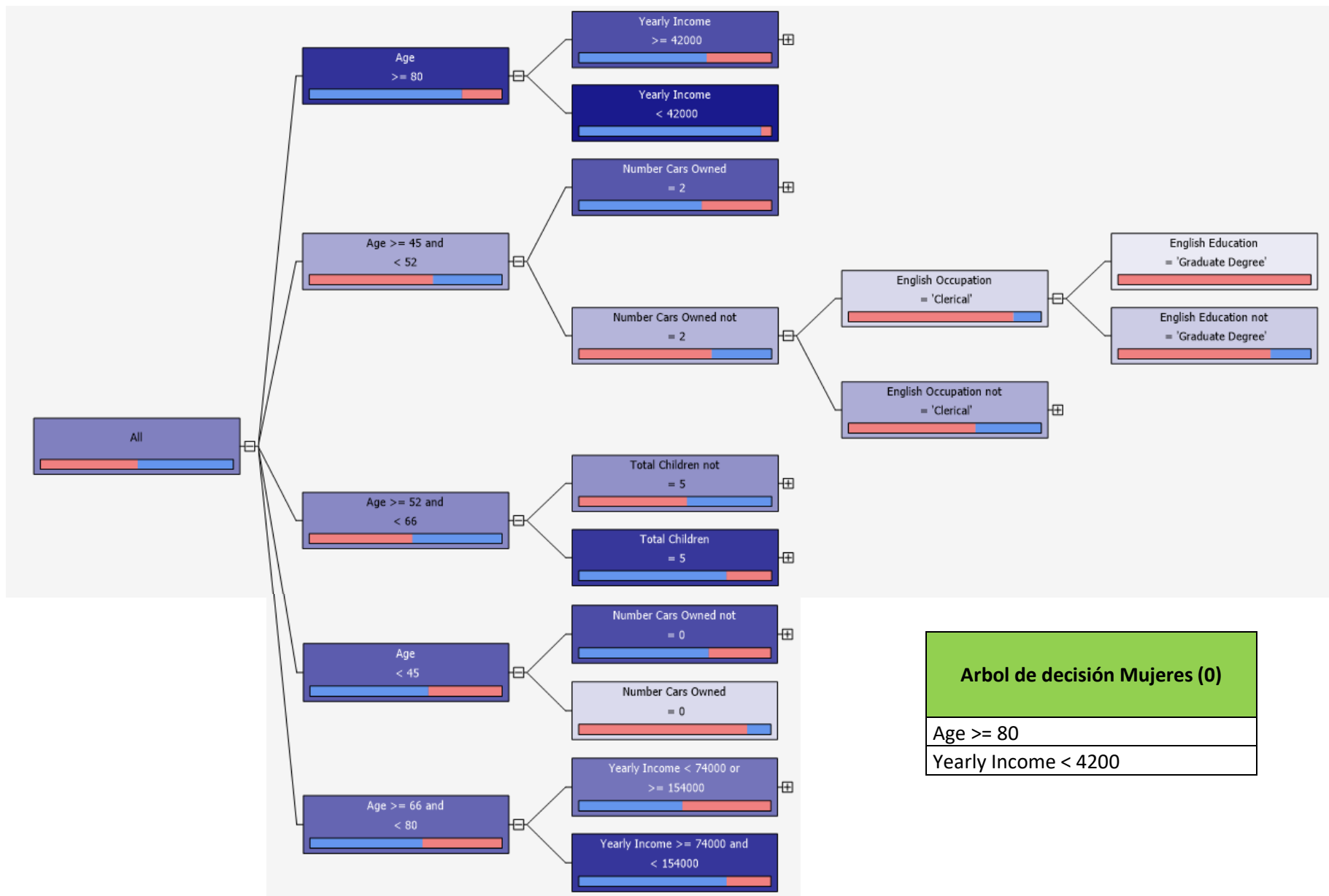
Number Cars Owned not = 2

English Occupation = 'Clerical'

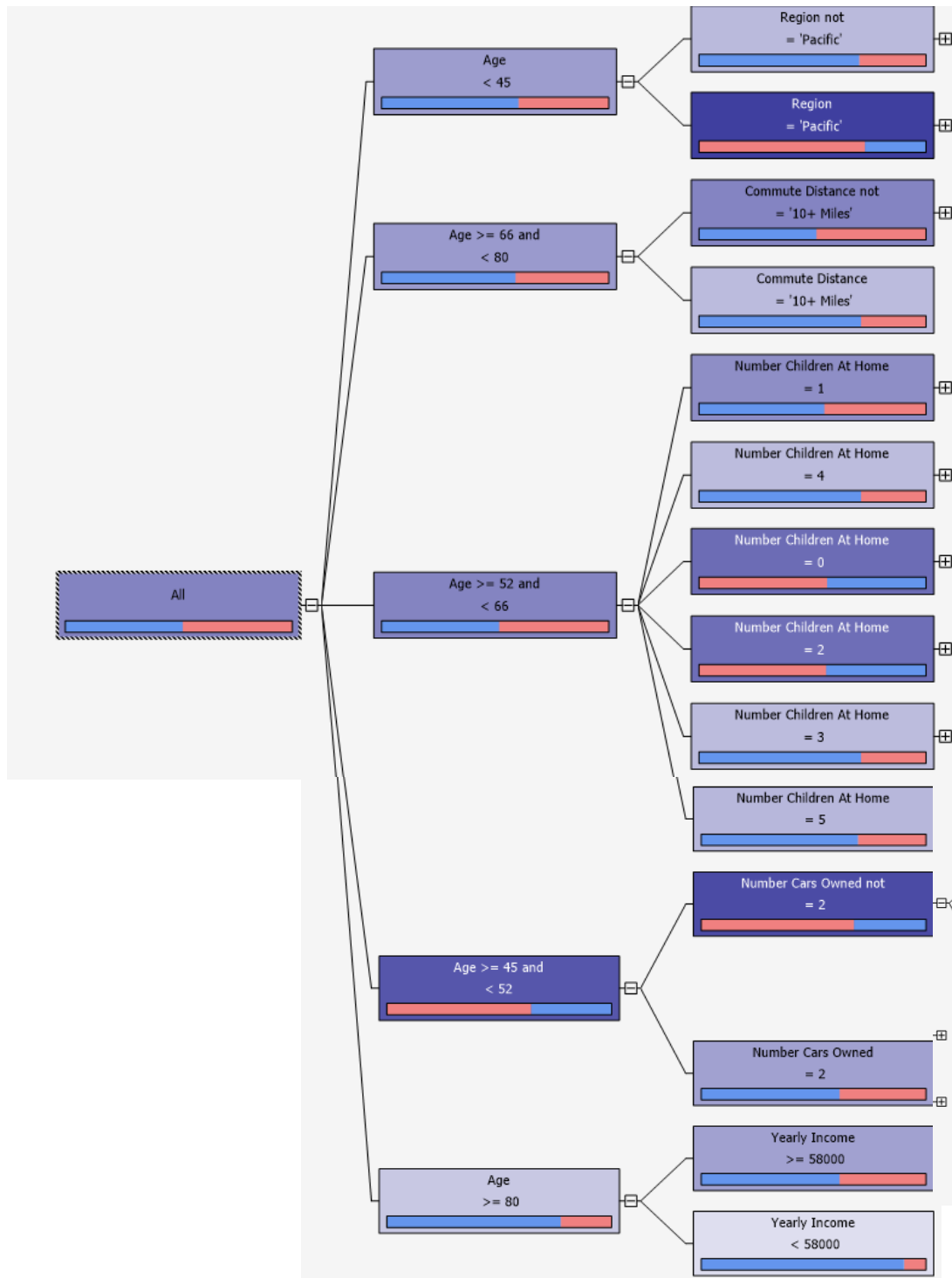
English Education = 'Graduate Degree'



## ÁRBOL DE DECISIÓN FEMALE (0)



## ÁRBOL DE DECISIÓN MALE (1)



### Arbol de decisión Hombres (1)

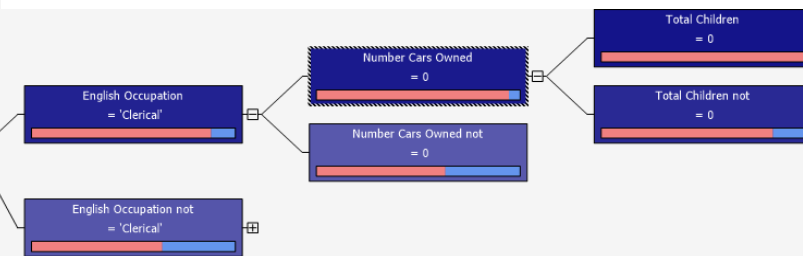
Age >= 45 and < 52

Number Cars Owned not = 2

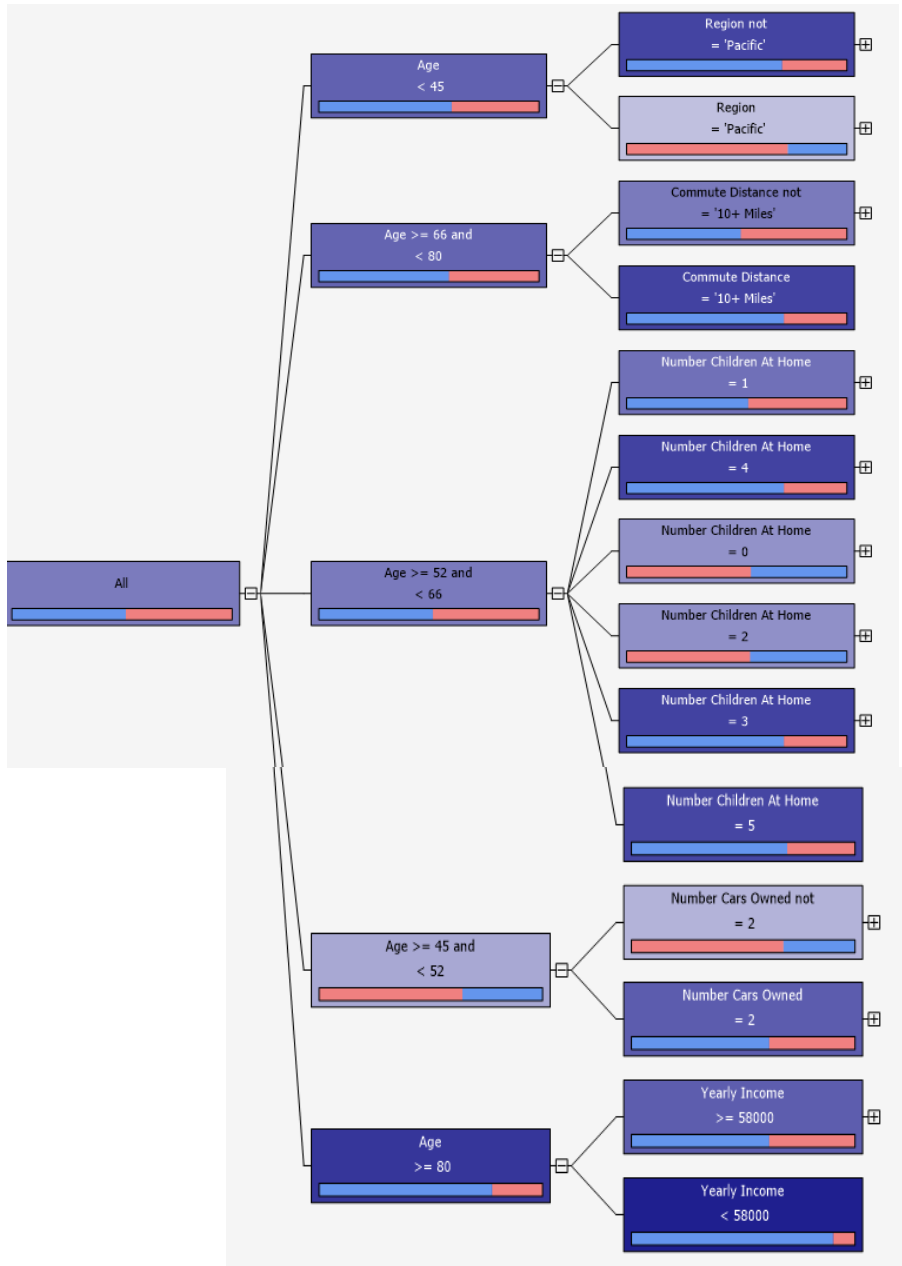
English Occupation = 'Clerical'

Number Cars Owned = 0

Total Children = 0



## ÁRBOL DE DECISIÓN MALE (0)



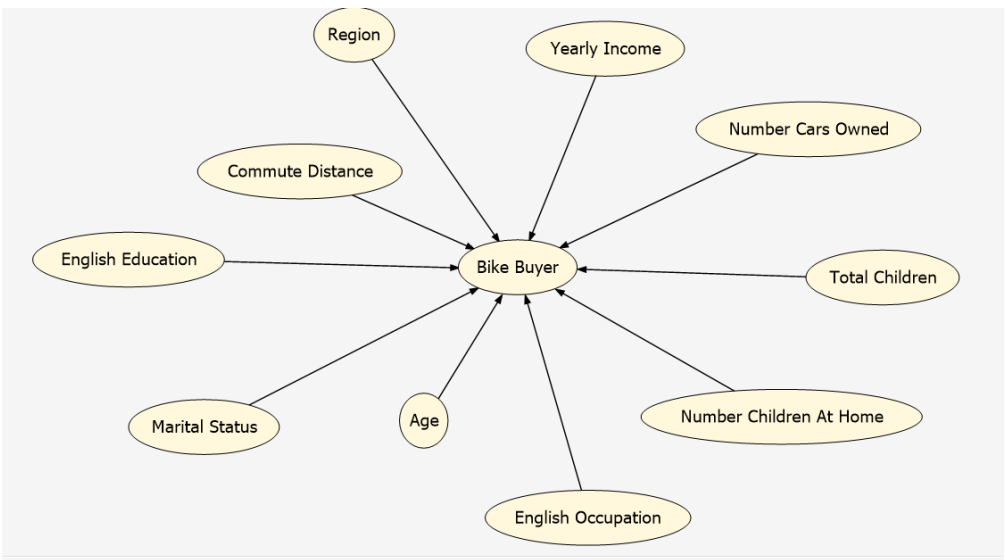
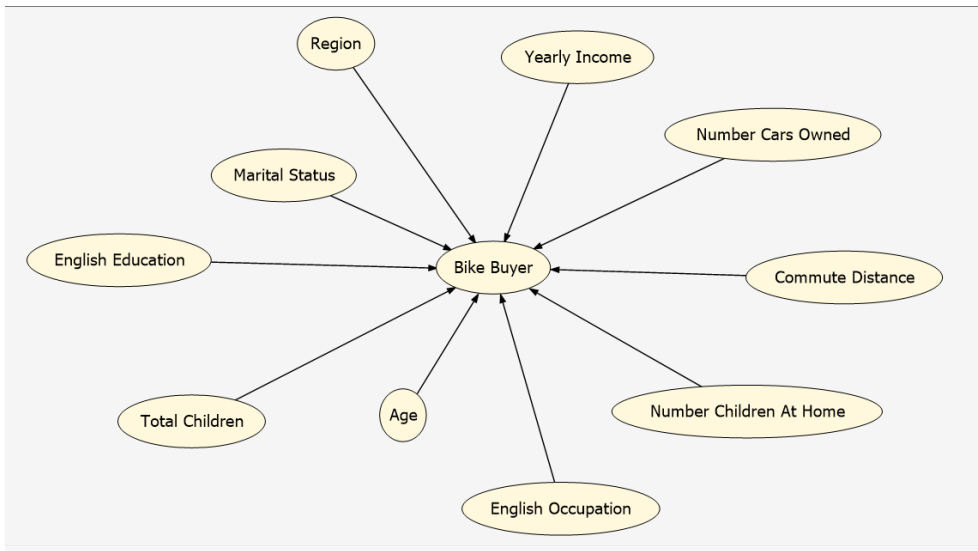
## Arbol de decisión Hombres (0)

Age >=80

Yearly Income < 5800

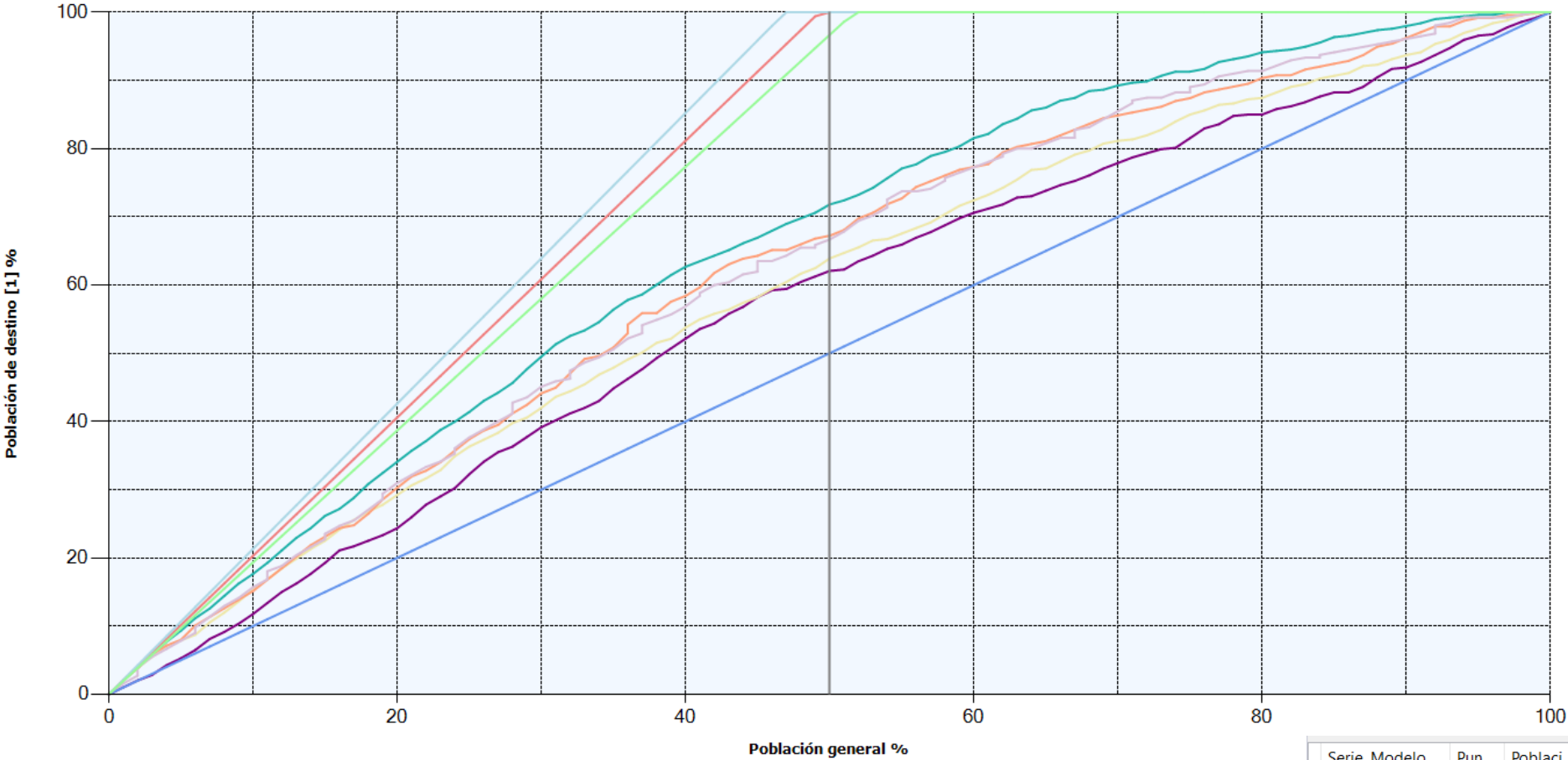
## DEPENDENCIAS MALE/FEMALE

Arbol de decisión/RedDependencias Hombres	Arbol de decisión/RedDependencias Mujeres
Age	Age
Region	Numbers Cars Owned
Number Children At Home	Total Children
Yearly Income	Yearly Income
Number Cars Owned	Commute Distance
English Occupation	Number Children at Home
Commute Distance	English Occupation
Marital Status	English Education
Total Children	Region
English Education	Marital Status



# GRAFICA DE ELEVACIÓN FEMALE

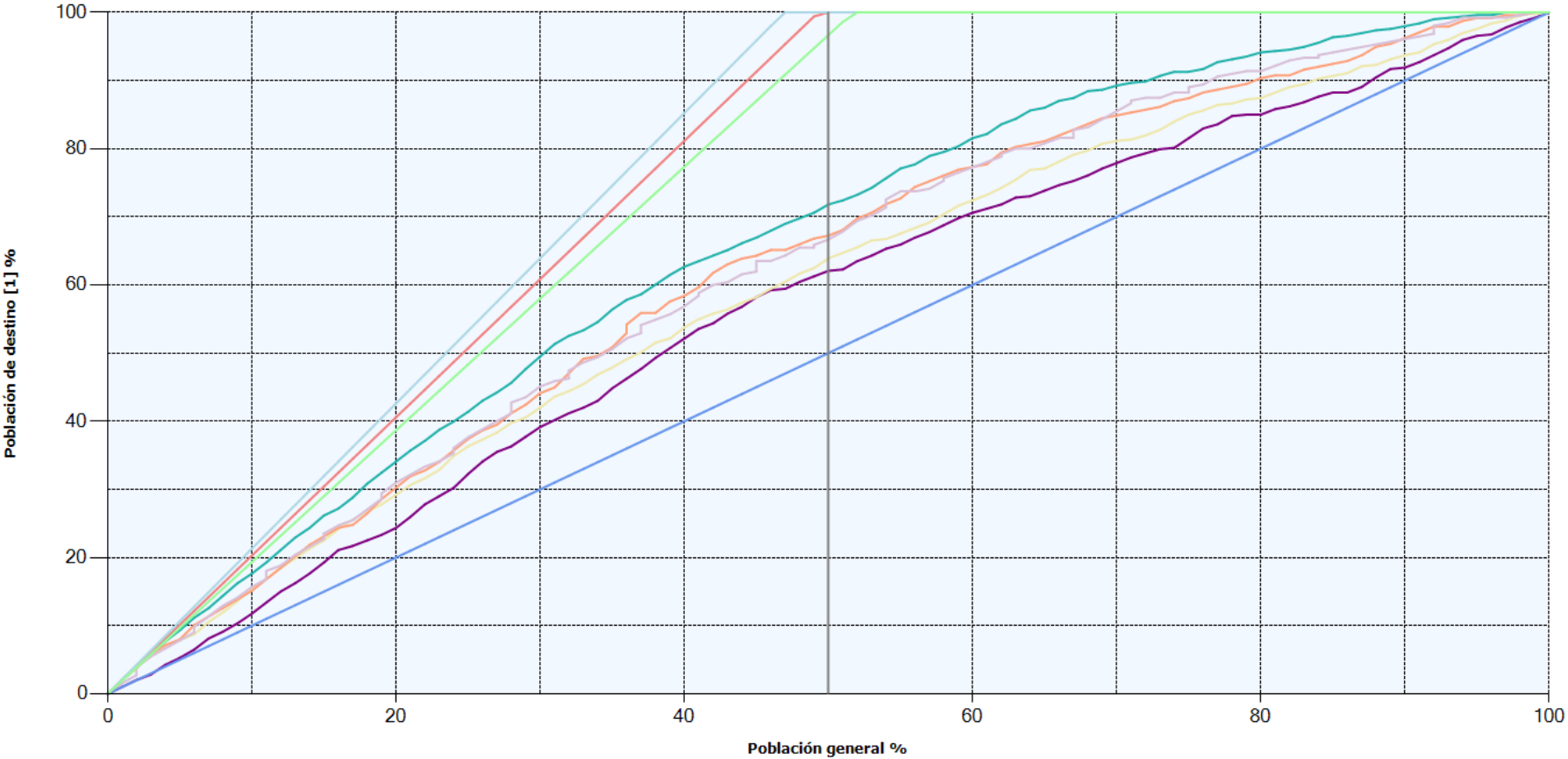
Gráfico de elevación de minería de datos para estructura de minería de datos: Targeted Mailing



Serie, Modelo	Pun...	Poblaci...	Probabil...
TM_Decision_...	0.70	71.81%	56.16%
TM_Clustering	0.61	62.07%	51.68%
TM_NaiveBayes	0.64	63.89%	47.78%
TM_DecisionT...	0.69	67.23%	42.35%
TM_Descision...	0.83	66.67%	55.78%
Modelo de es...		50.00%	
Modelo ideal ...		100.00%	
Modelo ideal ...		100.00%	
Modelo ideal ...		96.67%	

# GRAFICA DE ELEVACIÓN MALE

Gráfico de elevación de minería de datos para estructura de minería de datos: Targeted Mailing



Serie, Modelo	Pun...	Població...	Probabili...
TM_Decision_...	0.70	71.81%	56.16%
TM_Clustering	0.61	62.07%	51.68%
TM_NaiveBayes	0.64	63.89%	47.78%
TM_DecisionT...	0.69	67.23%	42.35%
TM_Descision...	0.83	66.67%	55.78%
Modelo de es...		50.00%	
Modelo ideal ...		100.00%	
Modelo ideal ...		100.00%	
Modelo ideal ...		96.67%	

## Predicción de árbol de decisión

### Resultado

Targeted Mailing.dmm [Diseño]								
Estructura de minería de datos    Modelos de minería de datos    Visor de modelos de minería de datos    Gráfico de precisión de minería de datos    Predicción de modelo de minería de datos								
Expression	Bike Buyer	Prospective...	FirstName	LastName	EmailAddress	AddressLine1	AddressLine2	calcAge
0.5629850...	1	6	Angel	Bel	abel@thep...	840 Charlot...		45
0.8185996...	1	7	Anna	Bennett	abennett@...	312 Via Del ...		49
0.6257011...	1	9	Arturo	Bhat	abhat@ada...	7040 Isabel...		53
0.5629850...	1	11	Abigal	Bryant	abryant@n...	2639 Anch...		46
0.6257011...	1	15	Adam	Carter	acarter@m...	4082 Rosly...		60
0.6693709...	1	17	Alberto	Castro	acastro@th...	2696 Santa...		47
0.6693709...	1	18	Alicia	Chande	achande@a...	5935 Isabel		51
0.5524897...	1	19	April	Chande	achande@c...	7939 Bayvl...		53
0.5629850...	1	23	Alexander	Clark	ac Clark@hu...	3243 Lanto...		51
0.6257011...	1	29	Alexandria	Cooper	acooper@c...	1624 Carls...		52
0.6257011...	1	30	Alexis	Davis	adavis@co...	6900 Willa...		60
0.9165249...	1	31	Abigal	Davis	adavis@fab...	70 N.w. Plaza		64
0.8185996...	1	32	Alicia	Deng	adeng@cpa...	8958 Carlet...		49
0.6693709...	1	36	Andre	Engineer	aengineer@...	North 9327...		49
0.6693709...	1	37	Andre	Fernandez	afernandez...	2292 Sprin...		50
0.5110795...	1	38	Adriana	Fernandez	afernandez...	1314 Green...		82
0.6257011...	1	40	Adam	Foster	afoster@wo...	4524 Fernd...		63
0.6257011...	1	47	Alexandra	Gonzalez	agonzalez@...	9075 Calle ...		59
0.6693709...	1	48	Abigal	Gray	agray@con...	78025 E. M...		51
0.8185996...	1	50	Alyssa	Griffin	agriffin@co...	6916 Azores		49
0.6248388...	1	53	Alex	Hall	ahal@coho...	9115 Arthu...		46
0.6243700...	1	55	Abigal	Hall	ahal@north...	8036 Sum...		47
0.6257011...	1	57	Alejandro	He	ahe@fabrik...	Pyramid Mall		59
0.6257011...	1	67	Ana	Jenkins	ajenkins@h...	4769 Buch...	Unit G 202	65
0.6257011...	1	70	Armando	Jimenez	ajimenez@...	3880 Batacao		57
0.5110795...	1	71	Anna	Kely	akely@adat...	7750 E Mod...		87
0.5524897...	1	77	Aimee	Liang	alang@fabri...	1601 Crow...		54
0.6693709...	1	78	Aimee	Lin	alin@iltware...	1133 Conc...		47
0.6257011...	1	79	Amy	Liu	alu@fabrika...	6837 Pirate...		56
0.6693709...	1	80	Arianna	Long	along@coh...	1349 Palm ...		50
0.9584710...	1	84	Arthur	Lopez	alopez@co...	7549 Long...		51
0.6257011...	1	85	Abby	Malhotra	amalhotra...	1019 Carlet...		53
0.6248388...	1	86	Andre	Malhotra	amalhotra...	6968 Mildre...		47
Ejecución de consulta finalizada con 914 filas recuperadas								

## Consulta en análisis services

```
SELECT
    PredictProbability([TM_Decision_Tree].[Bike Buyer]),
    [TM_Decision_Tree].[Bike Buyer],
    t.[ProspectiveBuyerKey],
    t.[FirstName],
    t.[LastName],
    t.[EmailAddress],
    t.[AddressLine1],
    t.[AddressLine2],
    t.[calcAge]
From
    [TM_Decision_Tree]
PREDICTION JOIN
    OPENQUERY([Adventure Works DW2008R2],
        'SELECT
            [ProspectiveBuyerKey],
            [FirstName],
            [LastName],
            [EmailAddress],
            [AddressLine1],
            [AddressLine2],
            (DATEDIFF(YYYY,[BirthDate],getdate())) AS [calcAge],
            [MaritalStatus],
            [Gender],
            [YearlyIncome],
            [TotalChildren],
            [NumberChildrenAtHome],
```

```
            [HouseOwnerFlag],
            [NumberCarsOwned],
            [Unknown]
        FROM
            [dbo].[ProspectiveBuyer]
        ') AS t
ON
    [TM_Decision_Tree].[Marital Status] =
    t.[MaritalStatus] AND
    [TM_Decision_Tree].[Gender] = t.[Gender] AND
    [TM_Decision_Tree].[Yearly Income] =
    t.[YearlyIncome] AND
    [TM_Decision_Tree].[Total Children] =
    t.[TotalChildren] AND
    [TM_Decision_Tree].[Number Children At Home] =
    t.[NumberChildrenAtHome] AND
    [TM_Decision_Tree].[House Owner Flag] =
    t.[HouseOwnerFlag] AND
    [TM_Decision_Tree].[Number Cars Owned] =
    t.[NumberCarsOwned] AND
    [TM_Decision_Tree].[Age] = t.[calcAge] AND
    [TM_Decision_Tree].[Bike Buyer] = t.[Unknown]
WHERE
    [TM_Decision_Tree].[Bike Buyer] =1
```

resultado.mdx - L...P59U9Q17(namas) - ✕

Cube: No cubes were found

Metadata

Search

Measure Group:

106 %

Error loading meta

Messages Results

Expression	Bike Buyer	ProspectiveBu...	FirstName	LastName	EmailAddress	AddressLine1	AddressLine2	calcAge
0.681999692...	1	1991	Todd	Ye	tye@wingtip...	7341 46th St		49
0.625701119...	1	1992	Tony	Yuan	tyuan@humo...	6099 Esperan...		53
0.625701119...	1	1996	Tamara	Zhao	tzhao@finear...	1397 Pairoso ...		56
0.625701119...	1	2001	Victor	Alonso	valonso@alpi...	2788 Mt. Tam...		60
0.625701119...	1	2002	Vanessa	Bennett	vbenett@the...	44606 N Divis...		61
0.818599680...	1	2003	Vincent	Chen	vchen@lucer...	9637 Kenneth...		50
0.625701119...	1	2004	Victoria	Flores	vflores@north...	409 S. Main S...		62
0.818599680...	1	2005	Victoria	Foster	vfoster@marg...	6696 Adria Dr...		49
0.625701119...	1	2007	Victoria	Kelly	vkelly@fabrik...	9098 Storey L...		57
0.625701119...	1	2008	Valerie	Ma	vma@cohoavin...	9693 Mellow...		59
0.625701119...	1	2010	Victor	Navarro	vnavarro@adv...	1084 Meado...		61
0.625701119...	1	2012	Virginia	Sanchez	vsanchez@lit...	311 Oakgrove...		63
0.629031327...	1	2014	Vincent	Xu	vxu@fabrika...	7700 Green R...		53
0.625701119...	1	2015	Vincent	Zeng	vzeng@conto...	4999 Corte S...		57
0.625701119...	1	2016	Wyatt	Alexander	walexander@...	8701 Tuolum...		63
0.625701119...	1	2017	Wendy	Alonso	walonso@co...	Simi @ The P...		59
0.511079595...	1	2020	Warren	Deng	wdeng@cpan...	861 Meadowv...		82
0.669370951...	1	2022	William	Garcia	wgarcia@coh...	Lake Elsinor ...		47
0.625701119...	1	2025	Willie	Hu	whu@cohoavin...	2500 N Sepul...		64
0.958471033...	1	2026	Warren	Huang	whuang@luc...	Po Box 08050		50
0.625701119...	1	2029	Willie	Li	wli@blueyond...	9531 Harris...		60
0.629031327...	1	2042	Willie	Xie	wxie@humon...	1813 Kaski Ln		58
0.958471033...	1	2044	Wesley	Ye	wye@cpandl...	1736 Windsor...		51
0.562985041...	1	2046	Willie	Zhou	wzhou@fabri...	77993 Mentor...		45
0.669370951...	1	2047	Xavier	Lewis	xlewis@bald...	8552 Stillwate...		47
0.625701119...	1	2048	Xavier	Phillips	xphillips@ad...	2059 Brookda...		56
0.624838812...	1	2051	Xavier	Wright	xwright@coh...	1654 Bonari ...		45
0.625701119...	1	2052	Yolanda	Chande	ychande@luc...	2575 West 27...		62
0.916524991...	1	2055	Zachary	Brown	zbrown@fine...	642 Camby Rd.		62

Query executed successfully.

LAPTOP-P59U9Q17 LAPTOP-P59U9Q17(namas) ASDataMining 00:00:01

## Consulta en sql server

SQLQuery1.sql - LA...W2008R2 (tec (64))\* - ✕

select \* from resultados  
order by 1 desc

106 %

Results Messages

	Expression	Bike Buyer	ProspectiveBuyerKey	FirstName	LastName	EmailAddress	AddressLine1	AddressLine2	calcAge
1	0.999420961204401	1	423	Connor	Patterson	cpatterson@lucernepublishing.com	12345 Sterling Avenue	NULL	51
2	0.958471033528232	1	464	Clarence	Shen	cshen@cohoineyard.com	2944 North Main St.	NULL	50
3	0.958471033528232	1	554	Derrick	Gutierrez	dgutierrez@alpineskihouse.com	1691 Boxer Blvd.	NULL	50
4	0.958471033528232	1	579	Donna	Nara	dnara@contoso.com	8166 Starflower Dr	NULL	51
5	0.958471033528232	1	84	Arthur	Lopez	alopez@cohoineyard.com	7549 Longview Rd.	NULL	51
6	0.958471033528232	1	99	Albert	Munoz	amunoz@cpandl.com	9371 Corte Del Sol	NULL	50
7	0.958471033528232	1	135	Adrian	Rogers	arogers@margiestravel.com	5543 Royal Arch Court	NULL	50
8	0.958471033528232	1	157	Anthony	Smith	asmith@alpineskihouse.com	1693 C Northwood Dr	NULL	50
9	0.958471033528232	1	290	Byron	Torres	btorres@contoso.com	6835 Lynwood Drive	NULL	50
10	0.958471033528232	1	776	Gerald	Fernandez	gfernandez@cpandl.com	9665 Pamploma Ct.	NULL	49
11	0.958471033528232	1	779	Grace	Foster	gfoster@margiestravel.com	5854 Onley Dr	NULL	50
12	0.958471033528232	1	859	Harold	Srini	hsrini@lucernepublishing.com	25500 Old Spanish Trail	NULL	49
13	0.958471033528232	1	861	Hannah	Taylor	htaylor@adventure-works.com	5055 Quigley St.	NULL	50
14	0.958471033528232	1	907	Jordyn	Alexander	jalexander@lucernepublishing.com	8040 Erie Dr	6 Monteiro	50
15	0.958471033528232	1	927	Julie	Chande	jchande@cohoineyard.com	5370 Adobe Drive	NULL	49
16	0.958471033528232	1	967	Jackson	Griffin	jgriffin@margiestravel.com	476 Denkinger Road	NULL	50
17	0.958471033528232	1	1009	Janelle	Mehta	jmehta@proseware.com	4422 Mariposa	NULL	50
18	0.958471033528232	1	1092	Jessie	Sun	jsun@proseware.com	4682 Deermeadow Way	NULL	51
19	0.958471033528232	1	1126	Karl	Anand	kanand@cohoineyard.com	1397 Pariso Ct.	NULL	50
20	0.958471033528232	1	1128	Kelsey	Anand	kanand@margiestravel.com	5622 Geary	NULL	50
21	0.958471033528232	1	1231	Kara	Sharma	ksharma@consolidatedmessenger	455 256th St.	NULL	50
22	0.958471033528232	1	1467	Marco	Rodriguez	mrodriguez@consolidatedmesse...	1200 First Ave.	NULL	50
23	0.958471033528232	1	1612	Preston	Fernandez	pfernandez@fabrikam.com	6179 Norris Court	#1104	50
24	0.958471033528232	1	1617	Priscilla	Jai	pjai@adatum.com	2748 Pine St.	NULL	50
25	0.958471033528232	1	1651	Ruben	Blanco	rblanco@adventure-works.com	491 Cali	NULL	49
26	0.958471033528232	1	1652	Renee	Blanco	rblanco@contoso.com	3596 Kingsford Dr.	NULL	49
27	0.958471033528232	1	1658	Roberto	Castro	rcastro@contoso.com	4016 Boyd	NULL	50
28	0.958471033528232	1	1685	Ross	Gonzalez	rgonzalez@consolidatedmesseng...	790 Shelbyville Road	NULL	51
29	0.958471033528232	1	1847	Sierra	Mitchell	smitchell@cpandl.com	5152 Fine Dr.	NULL	50
30	0.958471033528232	1	1914	Terrance	Arun	tarun@northwindtraders.com	2345 West Spencer R...	NULL	49
31	0.958471033528232	1	1985	Trinity	Ward	tward@alpineskihouse.com	4621 Candelero Dr.	NULL	50
32	0.958471033528232	1	2026	Warren	Huang	whuang@lucernepublishing.com	Po Box 08050	NULL	50