# Package 'mlba'

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Type Package

Title What the Package Does (Title Case)

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<b>Description</b> More about what it does (maybe more than one line)  Use four spaces when indenting paragraphs within the Description.
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accidents

accidents

# Description

Cleaned up and reduced version of the accidentsFull dataset to facilitate model building.

### Usage

accidents

#### **Format**

A data frame with 600 observations and 11 variables:

```
RushHour 1 = \text{rush hour}, 0 = \text{not (rush} = 6-9 \text{ am}, 4-7 \text{ pm})
```

**WRK\_ZONE** 1 = yes, 0 = no

**WKDY** 1 = weekday, 0 = weekend

**INT\_HWY** Interstate? 1 = yes, 0 = no

**LGTCON\_day** Light conditions - 1 = day, 0 = other

**LEVEL** 1 = level, 0 = other

SPD\_LIM Speed limit, miles per hour

**SUR\_COND\_dry** Surface conditions (1 = dry, 0 = other)

 $TRAF_two_way 1 = two-way traffic, 0 = other$ 

**WEATHER\_adverse** 0 = no adverse conditions, 1 = adverse condition

MAX\_SEV one of: "no-injury", "non-fatal", 2 = "fatal"

# **Details**

Data

### See Also

accidentsFull for the original dataset

### **Examples**

accidents

4 accidentsFull

accidentsFull

Accidents

#### **Description**

These data, from the U.S. Bureau of Transportation Statistics, can be used to predict whether an accident will results in injuries or fatalities, based on predictors such as alcohol involvement, time of day, road condition, etc. Such a prediction system could be used to prioritize responder resources at the time of the report.

### Usage

accidentsFull

#### **Format**

A data frame with 42183 observations and 24 variables:

**HOUR\_I\_R** 1 = rush hour, 0 = not (rush = 6-9 am, 4-7 pm)

**ALCHL\_I** 1 = Alcohol involved, 2 = not involved

**ALIGN\_I** 1 = straight, 2 = curve

**STRATUM\_R** 1 = NASS Crashes Involving At Least One Passenger Vehicle, i.e., A Passenger Car, Sport Utility Vehicle, Pickup Truck Or Van) Towed Due To Damage From The Crash Scene And No Medium Or Heavy Trucks Are Involved. 0 = not

**WRK ZONE** 1 = yes, 0 = no

 $WKDY_I_R$  1 = weekday, 0 = weekend

**INT\_HWY** Interstate? 1 = yes, 0 = no

**LGTCON\_I\_R** Light conditions - 1 = day, 2 = dark (including dawn/dusk), 3 = dark, but lighted, 4 = dawn or dusk

**MANCOL\_I\_R** 0 = no collision, 1 = head-on, 2 = other form of collision

**PED\_ACC\_R** 1 = pedestrian/cyclist involved, 0 = not

**RELJCT\_I\_R** 1 = accident at intersection/interchange, 0 = not at intersection

**REL\_RWY\_R** 1 = accident on roadway, 0 = not on roadway

**PROFIL\_I\_R** 1 = level, 0 = other

**SPD\_LIM** Speed limit, miles per hour

**SUR\_COND** Surface conditions (1 = dry, 2 = wet, 3 = snow/slush, 4 = ice, 5 = sand/dirt/oil, 8 = other, 9 = unknown)

**TRAF\_CON\_R** Traffic control device: 0 = none, 1 = signal, 2 = other (sign, officer...)

**TRAF\_WAY** 1 = two-way traffic, 2 = divided hwy, 3 = one-way road

VEH\_INVL Number of vehicles involved

**WEATHER\_R** 1 = no adverse conditions, 2 = rain, snow or other adverse condition

**INJURY CRASH** 1 = yes, 0 = no

NO\_INJ\_I Number of injuries

**PRPTYDMG\_CRASH** 1 = property damage, 2 = no property damage

**FATALITIES** 1 = yes, 0 = no

**MAX\_SEV\_IR** 0 = no injury, 1 = non-fatal inj., 2 = fatal inj.

accidentsnn 5

#### **Details**

Data are for the year 2001.

#### **Source**

US Dept. of Transportation, Bureau of Transportation Statistics, "TranStats," (www.transtats.bts.gov – select "databases" then "General Estimate System (GES)) http://www.transtats.bts.gov/Fields.asp?Table\_ID=1158&SYS\_Table\_Name=T\_GES\_ACCIDENT&User\_Table\_Name=Accident&Year\_Info=1&First\_Year=1999&Last\_Year=2001&Rate\_Info=1&Frequency=Annual&Data\_Frequency=Annual, Monthly&Map\_Info=&Is\_Survey=1&Univ\_Filter=&Latest\_Available\_Data=2001

Note: TranStats reports both variables with missing data, and their derived counterparts with imputed values filled in, denoted by an "I" at the end. Only one variant (the original or the derived) is included here. An "R" at the end of the variable name indicates that the Transtats variable has been collapsed into fewer categories for analysis purposes.

#### **Examples**

accidentsFull

accidentsnn

accidentsnn

### **Description**

Subset of the 'accidents' dataset

### Usage

accidentsnn

#### **Format**

A data frame with 999 observations and 5 variables:

```
ALCHL I 1 = Alcohol involved, 2 = not involved
```

```
PROFIL_I_R 1 = \text{level}, 0 = \text{other}
```

**SUR\_COND** Surface conditions (1 = dry, 2 = wet, 3 = snow/slush, 4 = ice, 5 = sand/dirt/oil, 8 = other, 9 = unknown)

VEH\_INVL Number of vehicles involved

**MAX\_SEV\_IR** 0 = no injury, 1 = non-fatal inj., 2 = fatal inj.

### **Details**

Data

#### See Also

accidentsFull for the full dataset

### **Examples**

head(accidentsnn)

6 Airfares

Airfares

Airfares

### **Description**

Airfares

### Usage

Airfares

#### **Format**

A data frame with 638 observations and 18 variables:

**S\_CODE** starting airport's code

S\_CITY starting city

**E\_CODE** ending airport's code

**E\_CITY** ending city

**COUPON** average number of coupons (a one-coupon flight is a non-stop flight, a two-coupon flight is a one stop flight, etc.) for that route

**NEW** number of new carriers entering that route between Q3-96 and Q2-97

**VACATION** whether a vacation route (Yes) or not (No); Florida and Las Vegas routes are generally considered vacation routes

**SW** whether Southwest Airlines serves that route (Yes) or not (No)

HI Herfindel Index – measure of market concentration (refer to BMGT 681)

S\_INCOME starting city's average personal income

E\_INCOME ending city's average personal income

**S\_POP** starting city's population

**E\_POP** ending city's population

**SLOT** whether either endpoint airport is slot controlled or not; this is a measure of airport congestion

**GATE** whether either endpoint airport has gate constraints or not; this is another measure of airport congestion

**DISTANCE** distance between two endpoint airports in miles

PAX number of passengers on that route during period of data collection

FARE average fare on that route

#### Source

Copyright 2016 Galit Shmueli and Peter Bruce

### **Examples**

head(Airfares)

Amtrak 7

Amtrak

Amtrak

# Description

Data

### Usage

Amtrak

### **Format**

A data frame with 159 observations and 2 variables:

Month

Ridership Amtrak Ridership Number of Passengers (in thousands)

### **Examples**

Amtrak

ApplianceShipments

Applicance Shipments

# Description

The series of quarterly shipments (in millions of dollars) of US household appliances between 1985 and 1989.

# Usage

 ${\tt Appliance Shipments}$ 

# **Format**

A data frame with 20 observations and 2 variables:

Quarter

**Shipments** 

# Source

Data courtesy Ken Black

### **Examples**

head(ApplianceShipments)

8 AutoAndElectronics

AustralianWines

AustralianWines

# Description

Monthly Australian sales of wine Jan 1980 - Jul 1995

### Usage

AustralianWines

#### **Format**

A data frame with 180 observations and 7 variables:

month

fortified

red

rose

sparkling

sweet.white

dry.white

### **Details**

Data

### Source

Website

### **Examples**

AustralianWines

AutoAndElectronics

AutoAndElectronics

# Description

URL of data set for a classification task—to classify Internet discussion posts as either auto-related or electronics-related.

The data set contains two sets of messages; one with 1000 auto-related posts and one with 1000 electronics-related posts.

### Usage

AutoAndElectronics

Bankruptcy 9

#### **Format**

An object of class character of length 1.

#### Value

the URL of dataset on Github

#### **Source**

The posts are taken from Internet groups devoted to autos and electronics

### **Examples**

```
## Not run: corpus <- Corpus(ZipSource(AutoAndElectronics, recursive=True))</pre>
```

Bankruptcy

Bankruptcy

# Description

Data

### Usage

Bankruptcy

#### **Format**

A data frame with 132 observations and 27 variables:

- **NO** Arbitrary ID number for each firm.
- **D** D=0 for failed firms, D=1 for healthy firms.
- YR Year of Bankruptcy for failed firm in matched pair
- R1 CASH/CURDEBT
- **R2** CASH/SALES
- R3 CASH/ASSETS
- **R4** CASH/DEBTS
- **R5** CFF0/SALES
- **R6** CFFO/ASSETS
- R7 CFFO/DEBTS
- **R8** COGS/INV
- **R9** CURASS/CURDEBT
- **R10** CURASS/SALES
- **R11** CURRASS/ASSETS
- **R12** CURDEBT/DEBTS
- R13 INC/SALES
- R14 INC/ASSETS

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**R15** INC/DEBTS

R16 UBCDEP/SALES

**R17** INCDEP/ASSETS

**R18** INCDEP/DEBTS

R19 SALES/REC

**R20** SALES/ASSETS

**R21** ASSETS/DEBTS

R22 WCFO/SALES

**R23** WCFO/ASSETS

R24 WCFO/DEBTS

#### Source

"Predicting Corporate Bankruptcy"; Darden Business Publishing. Case authors Mark E. Haskins (<HASKINSM@Darden.virginia.edu>) and Phillip E. Pfeifer (<PFEIFERP@Darden.virginia.edu>). (c) 1988 University of Virginia Darden School Foundation

# **Examples**

head(Bankruptcy)

banks Banks

# Description

Data

### Usage

banks

### **Format**

A data frame with 20 observations and 5 variables:

Obs

**Financial.Condition** 1 = financially weak; 0 = financially strong

TotCap.Assets

TotExp. Assets

TotLns.Lses.Assets

### **Examples**

banks

BathSoapHousehold 11

BathSoapHousehold

**BathSoapHousehold** 

#### **Description**

Data

#### Usage

BathSoapHousehold

#### **Format**

A data frame with 600 observations and 46 variables:

Member.id Unique identifier for each household

**SEC** Socioeconomic class (1 = high, 5 = low)

**FEH** Eating habits (1 = vegetarian, 2 = vegetarian) but eat eggs, 3 = nonvegetarian, 0 = not specified)

MT Native language (20 different languages)

**SEX** Gender of homemaker (1 = male, 2 = female)

AGE Age of homemaker

**EDU** Education of homemaker (1 = minimum, 9 = maximum)

**HS** Number of members in household

**CHILD** Presence of children in household (4 categories)

**CS** Television availability (1 = available, 2 = unavailable)

Affluence.Index Weighted value of durables possessed

No..of.Brands Number of brands purchased

Brand.Runs Number of instances of consecutive purchase of brands

Total.Volume Sum of volume

**No..of..Trans** Number of purchase transactions (multiple brands purchased in a month are counted as separate transactions)

Value Sum of value

Trans...Brand.Runs Average transactions per brand run

Vol.Tran Average volume per transaction

**Avg..Price** Average price of purchase

Pur.Vol.No.Promo.... Percent of volume purchased under no promotion

Pur.Vol.Promo.6.. Percent of volume purchased under promotion code 6

Pur.Vol.Other.Promo.. Percent of volume purchased under other promotions

Br..Cd..57..144 Percent of volume purchased of the brand

Br..Cd..55

Br..Cd..272

Br..Cd..286

Br..Cd..24

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Br..Cd..481

Br..Cd..352

Br..Cd..5

Others.999

Pr.Cat.1 Percent of volume purchased under the price category

Pr.Cat.2

Pr.Cat.3

Pr.Cat.4

PropCat.5 Percent of volume purchased under the product proposition category

PropCat.6

PropCat.7

PropCat.8

PropCat.9

PropCat.10

PropCat.11

PropCat.12

PropCat.13

PropCat.14

PropCat.15

### Source

Copyright 2019, Cytel, Inc. and Datastats, LLC

# **Examples**

head(BathSoapHousehold)

bicup2006

bicup2006

# Description

Data from a 2008 business intelligence competition, which focused on forecasting demand for public transportation.

Data

# Usage

bicup2006

BostonHousing 13

#### **Format**

A data frame with 1512 observations and 3 variables:

The file contains the historic information with known demand for a 3-week period, separated into 15-minute intervals, and dates and times for a future 3-day period (DEMAND = NaN), for which forecasts should be generated.

**DATE** date information **TIME** time information

**DEMAND** demand information; NA if missing

#### Source

Ken Black (used by permission)

# **Examples**

bicup2006

BostonHousing

**Boston Housing** 

### **Description**

This dataset contains information collected by the US Census Service concerning housing in the area of Boston Massachusetts. It was obtained from the StatLib archive (http://lib.stat.cmu.edu/datasets/boston).

### Usage

BostonHousing

#### **Format**

A data frame with 506 observations and 14 variables:

**CRIM** per capita crime rate by town

**ZN** proportion of residential land zoned for lots over 25,000 sq.ft.

**INDUS** proportion of non-retail business acres per town.

**CHAS** Charles River dummy variable (1 if tract bounds river; 0 otherwise)

**NOX** nitric oxides concentration (parts per 10 million)

**RM** average number of rooms per dwelling

AGE proportion of owner-occupied units built prior to 1940

**DIS** weighted distances to five Boston employment centres

**RAD** index of accessibility to radial highways

**TAX** full-value property-tax rate per \$10,000

PTRATIO pupil-teacher ratio by town

**LSTAT** % lower status of the population

MEDV Median value of owner-occupied homes in \$1000

**CAT.MEDV** 

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#### **Source**

The data was originally published by Harrison, D. and Rubinfeld, D.L. 'Hedonic prices and the demand for clean air', J. Environ. Economics & Management, vol.5, 81-102, 1978.

### **Examples**

BostonHousing

CanadianWorkHours

CanadianWorkHours

# Description

Data

# Usage

CanadianWorkHours

#### **Format**

A data frame with 35 observations and 2 variables:

Year

Hours average annual number of weekly hours spent by Canadian manufacturing workers

#### **Source**

Ken Black (used by permission)

# **Examples**

CanadianWorkHours

CatalogCrossSell

Catalog Cross Sell

# **Description**

Catalog Cross Sell

# Usage

CatalogCrossSell

Cereals 15

#### **Format**

A data frame with 4998 observations and 10 variables:

**Customer.Number** Customer IDs. For each customer, the following columns describe if the customer made a purchase in the division

**Clothing.Division** 

Housewares.Division

Health.Products.Division

**Automotive.Division** 

Personal.Electronics.Division

**Computers.Division** 

**Garden.Division** 

**Novelty.Gift.Division** 

Jewelry.Division

#### **Source**

The data for this case have been adapted from the data in a set of cases provided for educational purposes by the Direct Marketing Education Foundation ("DMEF Academic Data Set Two, Multi Division Catalog Company, Code: 02DMEF"); used with permission.

### **Examples**

head(CatalogCrossSell)

Cereals

Cereals

### **Description**

Cereals

#### Usage

Cereals

# **Format**

A data frame with 77 observations and 16 variables:

```
name Name of cereal
```

**mfr** Manufacturer of cereal where A = American Home Food Products; G = General Mills; K = Kelloggs; N = Nabisco; P = Post; Q = Quaker Oats; R = Ralston Purina

type cold or hot

calories calories per serving

protein grams of protein

fat grams of fat

16 CharlesBookClub

```
sodium milligrams of sodium
```

fiber grams of dietary fiber

carbo grams of complex carbohydrates

sugars grams of sugars

potass milligrams of potassium

vitamins vitamins and minerals - 0, 25, or 100, indicating the typical percentage of FDA recommended

**shelf** display shelf (1, 2, or 3, counting from the floor)

weight weight in ounces of one serving

cups number of cups in one serving

rating a rating of the cereals calculated by Consumer Reports

#### Source

Data analysis for student learning (DASL)

# **Examples**

head(Cereals)

CharlesBookClub

Charles Book Club

### **Description**

Data

### Usage

CharlesBookClub

#### **Format**

A data frame with 4000 observations and 24 variables:

**Seq.** Sequence number in the sample

**ID.** ID# in the full dataset

Gender 0=male, 1=female

M Monetary - total money spent on books

R Recency - Months since last purchase

 $\boldsymbol{F}\,$  Frequency - Total number of purchases

FirstPurch Months since first purchase

ChildBks this and following - book categories

YouthBks

CookBks

DoItYBks

Cosmetics 17

RefBks

ArtBks

GeogBks

ItalCook

ItalAtlas

ItalArt

**Florence** 

Related.Purchase Number of related books purchased

Mcode Recoding of M - see case description in DMBA and MLBA

Rcode Recoding of R - see case description in DMBA and MLBA

Fcode Recoding of F - see case description in DMBA and MLBA

Yes\_Florence

No\_Florence

#### Source

Adapted with permission from The Bookbinders Club, prepared by Nissan Levin and Jacob Zahavi.

# **Examples**

head(CharlesBookClub)

Cosmetics

Cosmetics

### **Description**

A drug store chain wants to learn more about cosmetics buyers purchase patterns. Specifically, they want to know what items are purchased in conjunction with each other, for purposes of display, point of sale special offers, and to eventually implement a real time recommender system to cross-sell items at time of purchase.

### Usage

Cosmetics

#### **Format**

A data frame with 1000 observations and 15 variables:

Trans. Transaction #

Bag

Blush

Nail.Polish

Brushes

Concealer

**Eyebrow.Pencils** 

18 courserating

Bronzer

Lip.liner

Mascara

Eye.shadow

**Foundation** 

Lip.Gloss

Lipstick

**Eyeliner** 

### **Details**

The data (synthetic) are in the form of a matrix in which each column represents a product group, and each row a customer transaction.

Data

### Source

statistics.com; Copyright 2016 Galit Shmueli and Peter Bruce

# **Examples**

head(Cosmetics)

courserating

Course Rating

# Description

Student ratings of online statistics courses at Statistics.com

# Usage

courserating

### **Format**

A data frame with 15 observations and 10 variables:

X

**SQL** 

**Spatial** 

PA1

DM.in.R

**Python** 

**Forecast** 

R.Prog

Hadoop

Regression

Coursetopics 19

### Source

Copyright 2016 statistics.com

# **Examples**

head(courserating)

Coursetopics

Coursetopics

# Description

Course topics at statistics.com (each row is a customer, column heads are topics taken [1] or not taken [0] by that customer)

# Usage

Coursetopics

### **Format**

A data frame with 365 observations and 8 variables:

Intro

**DataMining** 

Survey

Cat.Data

Regression

Forecast

DOE

SW

# Source

Copyright 2016 Galit Shmueli and Peter Bruce

# Examples

head(Coursetopics)

20 drug

# Description

Data on the quarterly sales for a department store over a 6-year period.

### Usage

DepartmentStoreSales

### **Format**

A data frame with 24 observations and 2 variables:

# Quarter

Sales quarterly sales for the department store

### **Examples**

DepartmentStoreSales

drug

drug

# Description

Data

# Usage

drug

# **Format**

A data frame with 60 observations and 7 variables:

**Entity** 

**Related.Entity** 

Relationship

Descrption

Related.Entity.Address.1

Related.Entity.Address.2

Related.Address.3

# **Examples**

drug

EastWestAirlinesCluster 21

#### EastWestAirlinesCluster

#### **EastWestAirlinesCluster**

### **Description**

East-West Airlines is trying to learn more about its customers. Key issues are their flying patterns, earning and use of frequent flyer rewards, and use of the airline credit card. The task is to identify customer segments via clustering.

### Usage

EastWestAirlinesCluster

#### **Format**

A data frame with 3999 observations and 12 variables:

ID. Unique ID

Balance Number of miles eligible for award travel

Qual\_miles Number of miles counted as qualifying for Topflight status

**cc1\_miles** Number of miles earned with freq. flyer credit card in the past 12 months: 1 = under 5,000; 2 = 5,000 - 10,000; 3 = 10,001 - 25,000; 4 = 25,001 - 50,000; 5 = over 50,000

cc2\_miles Number of miles earned with Rewards credit card in the past 12 months (see cc1\_miles)

cc3\_miles Number of miles earned with Small Business credit card in the past 12 months (see cc1\_miles)

Bonus\_miles Number of miles earned from non-flight bonus transactions in the past 12 months

Bonus\_trans Number of non-flight bonus transactions in the past 12 months

Flight\_miles\_12mo Number of flight miles in the past 12 months

Flight\_trans\_12 Number of flight transactions in the past 12 months

Days\_since\_enroll Number of days since Enroll\_date

Award. Dummy variable for Last\_award (1=not null, 0=null)

#### **Source**

Based upon real business data; company names have been changed. Copyright 2016 Galit Shmueli and Peter Bruce

### **Examples**

head(EastWestAirlinesCluster)

22 EastWestAirlinesNN

EastWestAirlinesNN

EastWestAirlinesNN

### **Description**

East-West Airlines has entered into a partnership with the wireless phone company Telcom to sell the latter's service via direct mail. These are a sample of data, provided so that the analyst can develop a model to classify East-West customers as to whether they purchase a wireless phone service contract (target variable 'Phone\_sale').

### Usage

EastWestAirlinesNN

#### **Format**

A data frame with 4987 observations and 16 variables:

ID. Unique ID

**Topflight** 

Balance Number of miles eligible for award travel

Qual\_miles Number of miles counted as qualifying for Topflight status

**cc1\_miles** Number of miles earned with freq. flyer credit card in the past 12 months: 1 = under 5,000; 2 = 5,000 - 10,000; 3 = 10,001 - 25,000; 4 = 25,001 - 50,000; 5 = over 50,000

cc2\_miles Number of miles earned with Rewards credit card in the past 12 months (see cc1\_miles)

cc3\_miles Number of miles earned with Small Business credit card in the past 12 months (see cc1\_miles)

Bonus\_miles Number of miles earned from non-flight bonus transactions in the past 12 months

Bonus\_trans Number of non-flight bonus transactions in the past 12 months

Flight\_miles\_12mo Number of flight miles in the past 12 months

Flight\_trans\_12 Number of flight transactions in the past 12 months

Online 12

**Email** E-mail address on file. 1 = yes, 0 = no?

Club\_member Member of the airline's club (paid membership), 1=yes, 0=no

**Any\_cc\_miles\_12mo** Dummy variable indicating whether member added miles on any creditcard type within the past 12 months (1='Y', 0='N')

**Phone\_sale** Dummy variable indicating whether member purchased Telcom service as a result of the direct mail campaign (1=sale, 0=no sale)

# Source

Based upon real business data; company names have been changed. Copyright 2016 Galit Shmueli and Peter Bruce

#### **Examples**

head(EastWestAirlinesNN)

eBayAuctions 23

eBayAuctions

ebay Auctions

# Description

Data

# Usage

eBayAuctions

### **Format**

A data frame with 1972 observations and 8 variables:

Category Category of the auctioned item.

currency

**sellerRating** a rating by eBay, as a function of the number of "good" and "bad" transactions the seller had on eBay.

**Duration** Number of days the auction lasted (set by seller at auction start)

endDay Day of week that the auction closed

ClosePrice Price item sold at (converted into USD)

**OpenPrice** Initial price set by the seller (converted into USD)

**Competitive.** whether the auction had a single bid (0) or more (1)

### Source

Copyright 2016 Galit Shmueli and Peter Bruce

# **Examples**

eBayAuctions

eBayNetwork

ebay Network

# **Description**

Data

# Usage

eBayNetwork

24 eBayTreemap

### **Format**

A data frame with 200 observations and 5 variables:

Seller

Bidder

Weight

Bidder.Volume

Seller.Volume

# **Examples**

eBayNetwork

eBayTreemap

ebay Treemap

# Description

Data

# Usage

eBayTreemap

### **Format**

A data frame with 10078 observations and 5 variables:

High.Bid

Seller.Feedback

Category

**Sub.Category** 

**Brand** 

# **Examples**

head(eBayTreemap)

Faceplate 25

Faceplate

Faceplate

### **Description**

Synthetic Data on Purchases of Phone Faceplates.

### Usage

Faceplate

### **Format**

A data frame with 10 observations and 7 variables:

**Transaction** 

Red

White

Blue

Orange

Green

Yellow

### Source

Copyright 2016 Galit Shmueli and Peter Bruce

# **Examples**

Faceplate

FarmAds

FarmAds

### **Description**

Data on advertisements posted at a website that caters to the needs of a specific farming community. Each ad is in a row, and each ad labeled as either -1 (not relevant) or 1 (relevant). The goal is to develop a predictive model that can classify ads automatically.

# Usage

FarmAds

### **Format**

A data frame with 4143 observations and 2 variables:

label 1: ad is relevant; -1 ad is not relevant

**text** text of ad pre-processed into a list of words. The location of the word in the ad is in some cases indicated by a prefix.

#### **Details**

Data

#### **Examples**

FarmAds

FlightDelays

Flight delays

### **Description**

All flights in January 2004 out of 3 DC airports (WAS) into 3 NYC airports. Flights not cancelled

### Usage

FlightDelays

#### **Format**

A data frame with 2201 observations and 13 variables:

CRS\_DEP\_TIME scheduled departure time

CARRIER The airline. AA=American Airlines, Inc.; CO=Continental Air Lines, Inc.; DH=Atlantic Coast Airlines; DL=Delta Air Lines, Inc.; EV=Atlantic Southeast Airlines; FL=Airtran Airways Corporation; MQ=American Eagle Airlines, inc; OH=Comair, Inc.; RU=Continental Express Airline; UA=United Air Lines, Inc.; US=US Airways, Inc.

**DEP\_TIME** Actual departure time

**DEST** Destination airport in NY: Kennedy (JFK), LaGuardia (LGA), Newark (EWR)

**DISTANCE** Flight distance in miles

FL\_DATE Flight date

FL\_NUM Flight number

**ORIGIN** Departure airport in Washingon DC: National (DCA), Baltimore-Washington (BWI), Dulles (IAD)

**Weather** Whether the weather was inclement (1) or not (0)

**DAY\_WEEK** Day of week. 1=Mon, 2=Tues...

DAY\_OF\_MONTH

TAIL\_NUM This number is airplane specific

**Flight.Status** Whether the flight was delayed or on time (defined as arriving within 15 min of scheduled time)

### **Source**

**Bureau of Transportation Statistics** 

### **Examples**

head(FlightDelays)

Fundraising 27

Fundraising

**Fundraising** 

#### **Description**

Data

### Usage

Fundraising

#### **Format**

A data frame with 3120 observations and 24 variables:

#### Row.Id

Row.Id.

zipconvert\_2 Zipcode group (zipcodes were grouped into 5 groups; only 4 are needed for analysis since if a potential donor falls into none of the four he or she must be in the other group. Inclusion of all five variables would be redundant and cause some modeling techniques to fail. A "1" indicates the potential donor belongs to this zip group.) 00000-19999 => 1 (omitted for above reason); 20000-39999 => zipconvert\_2; 40000-59999 => zipconvert\_3; 60000-79999 => zipconvert\_4; 80000-99999 => zipconvert\_5

zipconvert\_3

zipconvert 4

zipconvert\_5

**homeowner.dummy** 1 = homeowner, 0 = not a homeowner

**NUMCHLD** Number of children

**INCOME** Household income

**gender.dummy** Gender: 0 = Male 1 = Female

**WEALTH** Wealth Rating (Wealth rating uses median family income and population statistics from each area to index relative wealth within each state. The segments are denoted 0-9, with 9 being the highest wealth group and zero being the lowest. Each rating has a different meaning within each state.)

HV Average Home Value in potential donor's neighborhood in \$ hundreds

Icmed Median Family Income in potential donor's neighborhood in \$ hundreds

**Icavg** Average Family Income in potential donor's neighborhood in hundreds

IC15 Percent earning less than 15K in potential donor's neighborhood

**NUMPROM** Lifetime number of promotions received to date

RAMNTALL Dollar amount of lifetime gifts to date

MAXRAMNT Dollar amount of lifetime gifts to date

LASTGIFT Dollar amount of most recent gift

totalmonths Number of months from last donation to July 1998 (the last time the case was updated)

TIMELAG Number of months between first and second gift

AVGGIFT Average dollar amount of gifts to date

**TARGET\_B** 1 = Donor; 0 = Non-donor

**TARGET\_D** Target Variable: Donation Amount (in \$). We will NOT use it.

28 FutureFundraising

# **Examples**

head(Fundraising)

FutureFundraising

**FutureFundraising** 

# Description

Data

# Usage

FutureFundraising

### **Format**

A data frame with 2000 observations and 24 variables:

Row.Id

Row.Id.

zipconvert\_2

zipconvert\_3

zipconvert\_4

zipconvert\_5

homeowner.dummy

NUMCHLD

**INCOME** 

gender.dummy

WEALTH

HV

**Icmed** 

**Icavg** 

**IC15** 

NUMPROM

RAMNTALL

MAXRAMNT

LASTGIFT

total months

**TIMELAG** 

**AVGGIFT** 

TARGET\_B

 $TARGET\_D$ 

gdp	o and a second s	29
See	e Also	
	See Fundraising for a description of the dataset	
Exa	amples	
	head(FutureFundraising)	
٤	GDP	
Des	scription	
	Data	
Usa	age	
	gdp	
For	rmat	
	A data frame with 264 observations and 5 variables:	
	Country.Name	
	Country.Code	
	Indicator.Name	
	Indicator.Code	
	GDP2015 Gross domestic product of the countries.	
Sou	urce	
	Data from Veenhoven's world database of happiness. http://data.worldbank.org/indicatNY.GDP.MKTP.CD. World Development Indicators.	or/

Examples

head(gdp)

30 GermanCredit

GermanCredit

German credit

#### **Description**

Data

#### Usage

GermanCredit

#### **Format**

A data frame with 1000 observations and 32 variables:

**OBS.** Observation No.

**CHK\_ACCT** Checking account status. 0: < 0 DM; 1: 0 <...< 200 DM; 2: => 200 DM; 3: no checking account

**DURATION** Duration of credit in months

**HISTORY** Credit history. 0: no credits taken; 1: all credits at this bank paid back duly; 2: existing credits paid back duly till now; 3: delay in paying off in the past; 4: critical account

NEW\_CAR Purpose of credit. car (new) 0: No, 1: Yes

USED\_CAR Purpose of credit. car (used) 0: No, 1: Yes

**FURNITURE** Purpose of credit. furniture/equipment 0: No, 1: Yes

RADIO.TV Purpose of credit. radio/television 0: No, 1: Yes

**EDUCATION** Purpose of credit. education 0: No, 1: Yes

**RETRAINING** Purpose of credit. retraining 0: No, 1: Yes

AMOUNT Credit amount

**SAV\_ACCT** Average balance in savings account. 0 : < 100 DM; 1 : 100 <=...< 500 DM; 2 : 500 <=...< 1000 DM; 3 : =>1000 DM; 4 : unknown/ no savings account

**EMPLOYMENT** Present employment since. 0 : unemployed; 1 : < 1 year; 2 : 1 <= ... < 4 years 3 : 4 <= ... < 7 years 4 : >= 7 years

INSTALL\_RATE Installment rate as % of disposable income

MALE\_DIV Applicant is male and divorced. 0: No, 1: Yes

MALE SINGLE Applicant is male and single. 0: No, 1: Yes

MALE\_MAR\_or\_WID Applicant is male and married or a widower. 0: No, 1: Yes

**CO.APPLICANT** Application has a co-applicant. 0: No, 1: Yes

**GUARANTOR** Applicant has a guarantor. 0: No, 1: Yes

**PRESENT\_RESIDENT** Present resident since-years. 0: <= 1 year; 1: <...<= 2 years; 2: <...<= 3 years; 3: >4years

**REAL\_ESTATE** Applicant owns real estate. 0: No, 1: Yes

PROP\_UNKN\_NONE Applicant owns no property (or unknown). 0: No, 1: Yes

**AGE** Age in years

OTHER\_INSTALL Applicant has other installment plan credit. 0: No, 1: Yes

HairCareProduct 31

**RENT** Applicant rents. 0: No, 1: Yes

**OWN\_RES** Applicant owns residence. 0: No, 1: Yes

NUM\_CREDITS Number of existing credits at this bank

**JOB** Nature of job. 0: unemployed/ unskilled - non-resident; 1: unskilled - resident; 2: skilled employee / official; 3: management/ self-employed/highly qualified employee/ officer

NUM\_DEPENDENTS Number of people for whom liable to provide maintenance

**TELEPHONE** Applicant has phone in his or her name. 0: No, 1: Yes

FOREIGN Foreign worker. 0: No, 1: Yes

**RESPONSE** Credit rating is good. 0: No, 1: Yes

#### **Examples**

head(GermanCredit)

HairCareProduct

Hair Care Product

# Description

Fictional data representing an uplift study. A promotion for a hair color product was sent out to a sample of potential customers.

Promotional literature about a hair care product was sent to members of a buyers club. The goal is to determine which groups are most likely to make increased purchases as a result of receiving the promotion.

#### Usage

HairCareProduct

### **Format**

A data frame with 10000 observations and 8 variables:

Purchase 1: purchased; 0: not purchased

Age age of customer

Hair.Color one of 'Black', 'Red', 'Blond', or 'Brown'

U.S..Region one of 'Southwest', 'Northwest', 'Northeast', or 'Southeast'

Validation 0: training set; 1: validation set

Promotion\_ord 1: customer received a promotion; 0: did'n receive promotional material

**Gender\_ord** 1: male; 0: female **Residence\_ord** 1: urban; 0: rural

### **Source**

SAS Institute, used by permission; sample of 10,000 observations from full 126,184 dataset

# **Examples**

head(HairCareProduct)

32 LaptopSales

LaptopSales

Laptop Sales

### **Description**

Loads the full dataset from GitHub. The laptop sales data were part of the ENBIS 2009 Challenge in Industrial Statistics.

#### Usage

LaptopSales()

#### **Format**

A data frame with 7956 observations and 17 variables:

Date purchase date

**Configuration** A numerical code representing a combination of screen size, battery life, RAM, etc. Each code corresponds to a particular combination.

Retail.Price price of laptop in GBP

Screen.Size..Inches. screen size of laptop (Inches)

Battery.Life..Hours. battery life of laptop (Hours)

**RAM..GB.** RAM size of laptop(GB)

Processor.Speeds..GHz. processor speed of laptop (GHz)

Integrated.Wireless. whether the laptop has integrated wireless or not

HD.Size..GB. HD size of laptop (GB)

Bundled.Applications. whether the laptop comes with bundled applications or not

Customer.Postcode postcode in London of the customer

**Store.Postcode** postcode in London of the store

customer.X X geo coordinates for customer location.

customer.Y Y geo coordinates for customer location.

store.X X geo coordinates for store location

store.Y Y geo coordinates for store location

### Source

The laptop sales data were part of the ENBIS 2009 Challenge in Industrial Statistics

### See Also

LaptopSalesJanuary2008 for a subset of this dataset

#### **Examples**

```
laptopSales <- LaptopSales()
head(laptopSales)</pre>
```

LaptopSalesJanuary2008

Laptop Sales January 2008

#### **Description**

The laptop sales data were part of the ENBIS 2009 Challenge in Industrial Statistics.

This is a subset of the Laptop sales dataset. It includes only the Jan 2008 sales (the complete dataset includes the entire 2008 sales).

Data

#### Usage

LaptopSalesJanuary2008

#### **Format**

A data frame with 7956 observations and 17 variables:

Date purchase date

**Configuration** A numerical code representing a combination of screen size, battery life, RAM, etc. Each code corresponds to a particular combination.

Customer.Postcode postcode in London of the customer

**Store.Postcode** postcode in London of the store

Retail.Price price of laptop in GBP

Screen.Size..Inches. screen size of laptop (Inches)

Battery.Life..Hours. battery life of laptop (Hours)

**RAM..GB.** RAM size of laptop(GB)

**Processor.Speeds..GHz.** processor speed of laptop (GHz)

Integrated.Wireless. whether the laptop has integrated wireless or not

**HD.Size..GB.** HD size of laptop (GB)

**Bundled.Applications.** whether the laptop comes with bundled applications or not

**OS.X.Customer** X geo coordinates for customer location.

**OS.Y.Customer** Y geo coordinates for customer location.

**OS.X.Store** X geo coordinates for store location

**OS.Y.Store** Y geo coordinates for store location

CustomerStoreDistance

#### **Source**

The laptop sales data were part of the ENBIS 2009 Challenge in Industrial Statistics

### See Also

LaptopSales for the full dataset

#### **Examples**

head(LaptopSalesJanuary2008)

NaturalGasSales

liftExample

Lift example

# Description

Synthetic dataset to demonstrate lift

# Usage

liftExample

### **Format**

A data frame with 24 observations and 2 variables:

prob

actual

# **Examples**

head(liftExample)

NaturalGasSales

NaturalGasSales

# Description

Data

# Usage

NaturalGasSales

### **Format**

A data frame with 16 observations and 2 variables:

Quarter

Gas.Sales

# **Examples**

NaturalGasSales

#### NYPDMotorVehicleCollisions

#### NYPD Motor Vehicle Collisions

### **Description**

The Motor Vehicle Collisions crash table contains details on the crash event. Each row represents a crash event. The Motor Vehicle Collisions data tables contain information from all police reported motor vehicle collisions in NYC. This dataset is a random subset of 1000 entries of the NYPD motor vehicle collisions dataset

# Usage

NYPDMotorVehicleCollisions

#### **Format**

A data frame with 1000 observations and 29 variables:

**DATE** Occurrence date of collision

TIME Occurrence time of collision

**BOROUGH** Borough where collision occurred

**ZIP.CODE** Postal code of incident occurrence

**LATITUDE** Latitude coordinate for Global Coordinate System, WGS 1984, decimal degrees (EPSG 4326)

**LONGITUDE** Longitude coordinate for Global Coordinate System, WGS 1984, decimal degrees (EPSG 4326)

**LOCATION** Latitude, Longitude pair

ON.STREET.NAME Street on which the collision occurred

CROSS.STREET.NAME Nearest cross street to the collision

**OFF.STREET.NAME** Street address if known

NUMBER.OF.PERSONS.INJURED Number of persons injured

NUMBER.OF.PERSONS.KILLED Number of persons killed

NUMBER.OF.PEDESTRIANS.INJURED Number of pedestrians injured

NUMBER.OF.PEDESTRIANS.KILLED Number of pedestrians killed

NUMBER.OF.CYCLIST.INJURED Number of cyclists injured

NUMBER.OF.CYCLIST.KILLED Number of cyclists killed

NUMBER.OF.MOTORIST.INJURED Number of vehicle occupants injured

NUMBER.OF.MOTORIST.KILLED Number of vehicle occupants killed

**CONTRIBUTING.FACTOR.VEHICLE.1** Factors contributing to the collision for designated vehicle

**CONTRIBUTING.FACTOR.VEHICLE.2** Factors contributing to the collision for designated vehicle

**CONTRIBUTING.FACTOR.VEHICLE.3** Factors contributing to the collision for designated vehicle

36 ownerExample

**CONTRIBUTING.FACTOR.VEHICLE.4** Factors contributing to the collision for designated vehicle

**CONTRIBUTING.FACTOR.VEHICLE.5** Factors contributing to the collision for designated vehicle

UNIQUE.KEY Unique record code generated by system. Primary Key for Crash table.

**VEHICLE.TYPE.CODE.1** Type of vehicle based on the selected vehicle category (ATV, bicycle, car/suv, ebike, escooter, truck/bus, motorcycle, other)

**VEHICLE.TYPE.CODE.2** Type of vehicle based on the selected vehicle category (ATV, bicycle, car/suv, ebike, escooter, truck/bus, motorcycle, other)

**VEHICLE.TYPE.CODE.3** Type of vehicle based on the selected vehicle category (ATV, bicycle, car/suv, ebike, escooter, truck/bus, motorcycle, other)

**VEHICLE.TYPE.CODE.4** Type of vehicle based on the selected vehicle category (ATV, bicycle, car/suv, ebike, escooter, truck/bus, motorcycle, other)

**VEHICLE.TYPE.CODE.5** Type of vehicle based on the selected vehicle category (ATV, bicycle, car/suv, ebike, escooter, truck/bus, motorcycle, other)

#### **Source**

Random sample of the NYPD Motor Vehicle Collisions Dataset. (https://data.cityofnewyork.us/Public-Safety/NYPD-Motor-Vehicle-Collisions/h9gi-nx95)

### **Examples**

head(NYPDMotorVehicleCollisions)

ownerExample

Owner example

### **Description**

Data

### Usage

ownerExample

#### **Format**

A data frame with 24 observations and 2 variables:

Class

**Probability** 

#### **Examples**

head(ownerExample)

Pharmaceuticals 37

Pharmaceuticals

Pharmaceuticals

# Description

Data

# Usage

Pharmaceuticals

# **Format**

A data frame with 21 observations and 14 variables:

**Symbol** 

Name

Market\_Cap

Beta

PE\_Ratio

ROE

**ROA** 

 $Asset\_Turnover$ 

Leverage

Rev\_Growth

 $Net\_Profit\_Margin$ 

Median\_Recommendation

Location

Exchange

# Source

Compiled from various web sources. Copyright 2016 Galit Shmueli and Peter Bruce

# **Examples**

head(Pharmaceuticals)

SCstudents

RidingMowers

Riding Mowers

# Description

Data

# Usage

RidingMowers

# **Format**

A data frame with 24 observations and 3 variables:

**Income** Annual income in \$000

Lot\_Size In thousands of sq. feet

Ownership Whether the resident owns a riding mower or not

# Source

Data courtesy of Dean Wichern

# **Examples**

head(RidingMowers)

SCstudents

statistics.com Students

# Description

Data

# Usage

SCstudents

## **Format**

A data frame with 1696 observations and 2 variables:

latitude

longitude

# **Examples**

head(SCstudents)

Sept11Travel 39

Sept11Travel

Sept11Travel

# **Description**

Estimated Impacts of September 11th on US Travel

# Usage

Sept11Travel

# **Format**

A data frame with 172 observations and 4 variables:

#### Month

**Air.RPM..000s.** Air revenue passenger miles (1 RMP is one revenue passenger carried for one mile)

Rail.PM Rail passenger miles

VMT..billions. Vehicle miles traveled

## Source

 $Bureau\ of\ Transportation\ Statistics: \ https://www.bts.gov/archive/publications/estimated\_impacts\_of\_9\_11\_on\_us\_travel/index$ 

# **Examples**

Sept11Travel

ShampooSales

ShampooSales

# **Description**

Data on the monthly sales of a certain shampoo over a 3-year period.

# Usage

ShampooSales

# **Format**

A data frame with 36 observations and 2 variables:

# Month

Shampoo.Sales

40 SP500

## **Source**

Time Series Data Library, https://pkg.yangzhuoranyang.com/tsdl/

# **Examples**

ShampooSales

SouvenirSales

SouvenirSales

# **Description**

Monthly sales for a souvenir shop at a beach resort town in Queensland, Australia, between 1995–2001.

## Usage

SouvenirSales

# **Format**

A data frame with 84 observations and 2 variables:

Date

Sales

## **Source**

Time Series Data Library, https://pkg.yangzhuoranyang.com/tsdl/

# **Examples**

SouvenirSales

SP500

SP500

# **Description**

Monthly closing prices of S&P500

# Usage

SP500

# Format

A data frame with 100 observations and 2 variables:

Date

Close Monthly closing prices of S&P500

# **Examples**

head(SP500)

spambase 41

spambase

Spambase

# Description

Each of the words below are columns in the data and the values represent % of words in the e-mail that match that particular word. For example, make represent % of words in the e-mail that match "make".

# Usage

spambase

# **Format**

A data frame with 4601 observations and 58 variables:

make

address

all

 $W_3d$ 

our

over

remove

internet

order

mail

receive

will

people

report

addresses

free

business

email

you

credit

your

font

 $W_000$ 

money

hp

hpl

42 spambase

```
george
W_650
lab
labs
telnet
W_857
data
W_415
W_85
technology
W_1999
parts
pm
direct
cs
meeting
original
project
re.
edu
table
conference
C. C;
C..1 C(
C..2 C[
C..3 C!
C..4 C$
C..5 C#
CAP_avg average length of uninterrupted sequences of capital letters
CAP_long length of longest uninterrupted sequence of capital letters
CAP_tot total number of capital letters in the e-mail
Spam 1 = \text{spam}, 0 = \text{not spam}
```

# **Examples**

head(spambase)

SystemAdministrators 43

SystemAdministrators System Administrator

# **Description**

Data

## Usage

SystemAdministrators

## **Format**

A data frame with 75 observations and 3 variables:

Experience measures months of full-time system administrator experience

Training measures the number of relevant training credits

Completed.task either Yes or No, according to whether or not the administrator completed the tasks

## **Source**

Samprit Chatterjee

## **Examples**

head(SystemAdministrators)

TaxiCancellationCase Taxi Cancellation Case

# **Description**

The data are a randomly selected subset of the original data, with 10,000 rows, one row for each booking of a taxi. There are 17 input variables, including user (customer) ID, vehicle model, whether the booking was made online or via a mobile app, type of travel, type of booking package, geographic information, and the date and time of the scheduled trip. The target variable of interest is the binary indicator of whether a ride was canceled.

# Usage

TaxiCancellationCase

44 Tayko

#### **Format**

A data frame with 10000 observations and 19 variables:

row.

user\_id the ID of the customer (based on mobile number)

vehicle\_model\_id vehicle model type.

**package\_id** type of package (1=4hrs & 40kms, 2=8hrs & 80kms, 3=6hrs & 60kms, 4= 10hrs & 100kms, 5=5hrs & 50kms, 6=3hrs & 30kms, 7=12hrs & 120kms)

**travel\_type\_id** type of travel (1=long distance, 2= point to point, 3= hourly rental).

from\_area\_id unique identifier of area. Applicable only for point-to-point travel and packages

to\_area\_id unique identifier of area. Applicable only for point-to-point travel

from\_city\_id unique identifier of city

to\_city\_id unique identifier of city (only for intercity)

from\_date time stamp of requested trip start

to\_date time stamp of trip end

online\_booking if booking was done on desktop website

mobile\_site\_booking if booking was done on mobile website

booking\_created time stamp of booking

from\_lat latitude of from area

from\_long longitude of from area

to\_lat latitude of to area

to\_long longitude of to area

Car\_Cancellation 1=trip cancelled; 0=trip not cancelled

#### **Source**

Copyright 2016 statistics.com

## **Examples**

head(TaxiCancellationCase)

Tayko Tayko

# **Description**

Data

# Usage

Tayko

Tayko 45

## **Format**

```
A data frame with 2000 observations and 25 variables:
```

```
sequence_number Unique identifier
```

US Is it a US address? 1=yes; 0=no

**source\_a** Source catalog for the record. 1=yes; 0=no

(15 identified sources plus one "other source" category; 15 dummies created with "other" as the reference, hence omitted.)

source\_c

source\_b

source\_d

source\_e

source\_m

source\_o

source\_h

source\_r

source\_s

 $source\_t$ 

source\_u

source\_p

source\_x

source\_w

Freq Number of transactions in last year at source catalog

last\_update\_days\_ago How many days ago was last update to customer record

X1st\_update\_days\_ago How many days ago was 1st update to customer record

**Web.order** Customer placed at least 1 order via web. 1=yes; 0=no

Gender.male Customer is male. 1=yes; 0=no

Address\_is\_res Address is a residence. 1=yes; 0=no

Purchase Person made purchase in test mailing. 1=yes; 0=no

**Spending** Amount spent by customer intest mailing (\$)

## **Source**

Copyright 2016 statistics.com

# **Examples**

head(Tayko)

ToyotaCorolla ToyotaCorolla

TinyData

TinyData

# **Description**

Data includes information on a tasting score for a certain processed cheese. The two predictors are scores for fat and salt, indicating the relative presence of fat and salt in the particular cheese sample (where 0 is the minimum amount possible in the manufacturing process, and 1 the maximum). The outcome variable is the cheese sample's consumer taste preference, where like or dislike indicate whether the consumer likes the cheese or not. Data

# Usage

TinyData

## **Format**

A data frame with 6 observations and 4 variables:

Obs. unique identifier

**Fat** relative presence of fat in cheese. (where 0 is the minimum amount possible in the manufacturing process, and 1 the maximum)

**Salt** relative presence of salt in cheese. (where 0 is the minimum amount possible in the manufacturing process, and 1 the maximum)

Acceptance Consumer taste preference; one of 'like' or 'dislike'

# **Examples**

head(TinyData)

ToyotaCorolla

Toyoto Corolla

# Description

Data

# Usage

ToyotaCorolla

ToyotaCorolla 47

#### **Format**

A data frame with 1436 observations and 39 variables:

Id Record\_ID; unique identifier

Model Model Description

Price Offer Price in EUROs

Age\_08\_04 Age in months as in August 2004

Mfg Month Manufacturing month (1-12)

Mfg\_Year Manufacturing year

KM Accumulated Kilometers on odometer

Fuel\_Type Fuel Type. one of 'Petrol', 'Diesel', or 'CNG'

**HP** Horse Power

Met\_Color Metallic Color? (Yes=1, No=0)

Color Color (Blue, Red, Grey, Silver, Black, etc.)

Automatic (Yes=1, No=0)

**CC** Cylinder Volume in cubic centimeters

**Doors** Number of doors

Cylinders Number of cylinders

Gears Number of gear positions

Quarterly\_Tax Quarterly road tax in EUROs

Weight Weight in Kilograms

Mfr\_Guarantee Within Manufacturer's Guarantee period (Yes=1, No=0)

**BOVAG\_Guarantee** BOVAG (Dutch dealer network) Guarantee (Yes=1, No=0)

Guarantee\_Period Guarantee period in months

ABS Anti-Lock Brake System (Yes=1, No=0)

Airbag\_1 Driver\_Airbag (Yes=1, No=0)

**Airbag\_2** Passenger Airbag (Yes=1, No=0)

Airco Airconditioning (Yes=1, No=0)

**Automatic\_airco** Automatic Airconditioning (Yes=1, No=0)

**Boardcomputer** Boardcomputer (Yes=1, No=0)

**CD\_Player** CD Player (Yes=1, No=0)

Central\_Lock Central Lock (Yes=1, No=0)

Powered\_Windows Powered Windows (Yes=1, No=0)

**Power\_Steering** Power Steering (Yes=1, No=0)

Radio (Yes=1, No=0)

Mistlamps (Yes=1, No=0)

**Sport\_Model** Sport Model (Yes=1, No=0)

**Backseat Divider** Backseat Divider (Yes=1, No=0)

Metallic\_Rim Metallic Rim (Yes=1, No=0)

Radio cassette Radio Cassette (Yes=1, No=0)

Parking\_Assistant Parking assistance system (Yes=1, No=0)

Tow\_Bar Tow Bar (Yes=1, No=0)

48 UniversalBank

## Source

Copyright 2016 Nitin Patel, Galit Shmueli and Peter Bruce

# **Examples**

head(ToyotaCorolla)

ToysRUsRevenues

ToysRUsRevenues

# Description

The quarterly revenues of Toys "R" Us between 1992 and 1995

# Usage

ToysRUsRevenues

# **Format**

A data frame with 16 observations and 4 variables:

**Index** 

**QuarterYear** 

Revenue.in.million...

Quarter

## Source

Chris Albright

# **Examples**

ToysRUsRevenues

UniversalBank

UniversalBank

# Description

Synthetic dataset courtesy of statistics.com

# Usage

UniversalBank

Universities 49

#### **Format**

A data frame with 500 observations and 14 variables:

**ID** Customer ID

Age Customer's age in completed years

Experience #years of professional experience

**Income** Annual income of the customer (\$000)

**ZIP.Code** Home Address ZIP code

**Family** Family size of the customer

CCAvg Avg. spending on credit cards per month (\$000)

Education Education Level. 1: Undergrad; 2: Graduate; 3: Advanced/Professional

Mortgage Value of house mortgage if any. (\$000)

**Personal.Loan** Did this customer accept the personal loan offered in the last campaign?

**Securities. Account** Does the customer have a securities account with the bank?

**CD.Account** Does the customer have a certificate of deposit (CD) account with the bank?

Online Does the customer use internet banking facilities?

**CreditCard** Does the customer use a credit card issued by UniversalBank?

## Source

Copyright Cytel, Inc. 2005

## **Examples**

UniversalBank

Universities

Universities

## **Description**

The dataset on American college and university rankings contains information on 1302 American colleges and universities offering an undergraduate program. For each university, there are 17 measurements that include continuous measurements (such as tuition and graduation rate) and categorical measurements (such as location by state and whether it is a private or a public school).

# Usage

Universities

50 Utilities

## **Format**

A data frame with 1302 observations and 20 variables:

College.Name

State

Public..1...Private..2.

X..appli..rec.d

X..appl..accepted

X..new.stud..enrolled

X..new.stud..from.top.10.

X..new.stud..from.top.25.

X..FT.undergrad

X..PT.undergrad

in.state.tuition

out.of.state.tuition

room

board

add..fees

estim..book.costs

estim..personal..

X..fac..w.PHD

stud..fac..ratio

**Graduation.rate** 

## Source

Copyright 2016 Galit Shmueli and Peter Bruce. Compiled from US News and World Report rankings on 1302American Colleges and Universities

# **Examples**

head(Universities)

Utilities

Utilities

# **Description**

Data

# Usage

Utilities

Veerhoven 51

## **Format**

A data frame with 22 observations and 9 variables:

Company Company name

Fixed\_charge Fixed-charge coverage ratio (income/debt)

RoR Percent rate of return on capital

Cost Cost per KW capacity in place

Load\_factor Annual load factor

Demand\_growth Percent demand growth

Sales (KWH use per year)

Nuclear Percent nuclear

Fuel\_Cost Total fuel costs (cents per KWH)

# **Examples**

Utilities

Veerhoven

Veerhoven.

# Description

Data measuring happiness of countries. according to a 2006 Gallup survey.

# Usage

Veerhoven

# **Format**

A data frame with 159 observations and 5 variables:

Serial

Code

Nation

Score

X..surveys

# **Examples**

Veerhoven

52 VoterPersuasion

VoterPersuasion

**VoterPersuasion** 

## **Description**

Data

#### Usage

VoterPersuasion

#### **Format**

A data frame with 10000 observations and 79 variables:

VOTER\_ID Unique ID for each voter

**SET\_NO** Set number, assigned at random. Can be used to divide development and test sets. Build models using only sets 1 & 2. Validate on the hold-out sample of set\_no=3 voters

**OPP\_SEX** % of people with the same first name who have a different gender (Derived)

**AGE** Age (Voterfile)

**HH\_ND** Number of Democrats in this household (Derived)

**HH\_NR** Number of Republicans in this household (Derived)

HH\_NI Number of independents in this household (Derived)

MED\_AGE Census Block Group median age (Census)

NH\_WHITE % Non-Hispanic Caucasian (Census)

NH\_AA % Non-Hispanic African-American (Census)

NH\_ASIAN % Non-Hispanic Asian (Census)

NH\_MULT % Non-Hispanic multi-race (Census)

**HISP** % Hispanic (Census)

COMM\_LT10 % of workers who commute less than 10 minutes each way (Census)

**COMM\_609P** % of workers who commute 60+ minutes each way (Census)

MED\_HH\_INC Median household income (Census)

**COMM CAR** % of workers who commute by themselves by car (Census)

**COMM\_CP** % of workers who carpool (Census)

**COMM\_PT** % of workers who take public transportation (Census)

**COMM\_WALK** % of workers who walk to work (Census)

KIDS % of families with children under 18 (Census)

M\_MAR % of adult men who are married (Census)

**F\_MAR** % of adult females who are married (Census)

ED\_4COL % of adult population with at least 4 years of college (Census)

**GENDER\_F** Flag - is female (Voterfile)

**GENDER\_M** Flag - is male (Voterfile)

**H\_AFDLN3P** Flag - household all-female different last names, 3+ members (Derived)

VoterPersuasion 53

**H\_F1** Flag - household single female (Derived)

**H\_M1** Flag - Single male (Derived)

H\_MFDLN3P Flag - household male & female, different last names, 3+ members (Derived)

**PARTY\_D** Flag - Democrat (Voterfile)

PARTY\_I Flag - Independent (Voterfile)

**PARTY R** Flag - Republican (Voterfile)

**VPP\_08** Flag - vote history - voted presidential primary 2008 (Derived)

**VPP\_12** Flag - vote history - voted presidential primary 2012 (Derived)

**VPR\_08** Flag - vote history - voted primary 2008 (Derived)

**VPR\_10** Flag - vote history - voted primary 2010 (Derived)

**VPR\_12** Flag - vote history - voted primary 2012 (Derived)

**VG 04** Flag - vote history - voted general election 2004 (Derived)

VG\_06 Flag - vote history - voted general election 2006 (Derived)

 $VG\_08 \ \ \text{Flag - vote history - voted general election 2008 (Derived)}$ 

VG\_10 Flag - vote history - voted general election 2010 (Derived)

VG\_12 Flag - vote history - voted general election 2012 (Derived)

PP\_PELIG Voted in % of presidential primaries in which they were eligible (Derived)

PR\_PELIG Voted in % of non-presidential primaries in which they were eligible (Derived)

**AP\_PELIG** Voted in % of any kind of primary in which they were eligible (Derived)

**G\_PELIG** Voted in % of general elections in which they were eligible (Derived)

**E\_PELIG** Voted in % of any kind of election in which they were eligible (Derived)

**NL5G** # of the last 5 elections in which the voter voted (Derived)

**NL3PR** # of last 3 primaries in which the voter voted (Derived)

**NL5AP** # of last 5 primaries of any kind in which the voter voted (Derived)

**NL2PP** # of last 2 presidential primaries in which the voter voted (Derived)

**REG\_DAYS** Days since the voter registered to vote at their current address (Derived)

**UPSCALEBUY** Upscale Buyer In Home (Commercial Data)

**UPSCALEMAL** Upscale Male Buyer In Home (Commercial Data)

**UPSCALEFEM** Upscale Female Buyer In Home (Commercial Data)

BOOKBUYERI Book Buyer In Home (Commercial Data)

FAMILYMAGA Family Magazine In Home (Commercial Data)

**FEMALEORIE** Female Oriented Magazine In Home (Commercial Data)

**RELIGIOUSM** Religious Magazine In Home (Commercial Data)

GARDENINGM Gardening Magazine In Home (Commercial Data)

**CULINARYIN** Culinary Interest Magazine In Home (Commercial Data)

**HEALTHFITN** Health Fitness Magazine In Home (Commercial Data)

**DOITYOURSE** Do It Yourselfer Magazine In Home (Commercial Data)

FINANCIALM Financial Magazine In Home (Commercial Data)

**RELIGIOUSC** Religious Contributor In Home (Commercial Data)

**POLITICALC** Political Contributer In Home (Commercial Data)

54 WalMartStock

MEDIANEDUC Median Education Years (Commercial Data)

**CAND1S** Wave 1 candidate ID with strength of support. SD=Strong Democrat, LD=Lean Democrat, U=Undecided, LR=Lean Republican, SR=Strong Republican (Synthetic)

**CAND2S** Wave 2 candidate ID with strenght of support (Synthetic)

MESSAGE\_A Flag indicating if the voter received message A (Synthetic)

MESSAGE\_A\_REV Flag indicating if the voter received message B (Synthetic)

**I3** Independent 3-way. Y if voter is an independent or minor party member. N if Democrat or Republican

CAND1\_UND Undecided in wave 1 IDs

CAND2\_UND Undecided in wave 2 IDs

**MOVED\_AD** Moved to be more supportive of the Democratic candidate. Stronger support for the Democrat or weaker support for the Republican in wave 2 than in wave 1.

MOVED\_A 0/1 encoding of 'MOVED\_AD'

opposite reverse of 'MOVED\_AD'

Partition 'V'=validation, 'T'= test set

#### **Source**

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#### **Examples**

VoterPersuasion

WalMartStock

WalMartStock

# **Description**

The series of Walmart daily closing prices between February 2001 and February 2002. Data

# Usage

WalMartStock

## **Format**

A data frame with 248 observations and 2 variables:

**Date** 

Close

## Source

publicly available, for example, at <a href="https://finance.yahoo.com">https://finance.yahoo.com</a>. These data are also used in "Data Analysis for Managers" by Albright, Winston & Zappe.

## **Examples**

WalMartStock

WestRoxbury 55

WestRoxbury

West Roxbury.

# **Description**

Data

## Usage

WestRoxbury

## **Format**

A data frame with 5802 observations and 14 variables:

TOTAL.VALUE Total assessed value for property, in thousands of USD

TAX Tax bill amount based on total assessed value multiplied by the tax rate

LOT.SQFT Total lot size of parcel in square feet

YR.BUILT Year property was built

GROSS.AREA Gross floor area

LIVING.AREA Total living area for residential properties (in square feet)

FLOORS Number of floors

**ROOMS** Total number of rooms

**BEDROOMS** Total number of bedrooms

FULL.BATH Total number of full baths

HALF.BATH Total number of half baths

KITCHEN Total number of kitchens

FIREPLACE Total number of fireplaces

**REMODEL** When house was remodeled (Recent/Old/None)

# **Examples**

WestRoxbury

Wine

Wine.

# Description

Wine dataset contains properties of wine captured from three different wineries in the same region. There are 13 variables describing various properties of wine and 3 classes. This dataset can be used for classification with Type as a output variable OR can be used to perform clustering to without using Type variable to see the accuracy of prediction.

Data

56 Wine

# Usage

Wine

## **Format**

A data frame with 178 observations and 14 variables:

Type Type of wine; one of 'A', 'B', or 'C'

Alcohol

Malic\_Acid

Ash

Ash\_Alcalinity Alcalinity of ash

Magnesium

Total\_Phenols

Flavanoids

Nonflavanoid\_Phenols

**Proanthocyanins** 

Color\_Intensity

Hue

**OD280\_OD315** OD280/OD315 of diluted wines

**Proline** 

# Source

This data set can be found in the UCI Machine Learning Repository (https://archive.ics.uci.edu/ml/datasets/wine)

# **Examples**

Wine

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