Tutorial Business Analytics

Workshop: Data Mining Cup

Decision Sciences & Systems (DSS)

Department of Informatics

TU München

Tutorial Business Analytics

Outline

Today's topics:

- The Setting: Predictive Marketing - Campaign on car insurance
- Reproducibility & Correct Submission
- Starting with support

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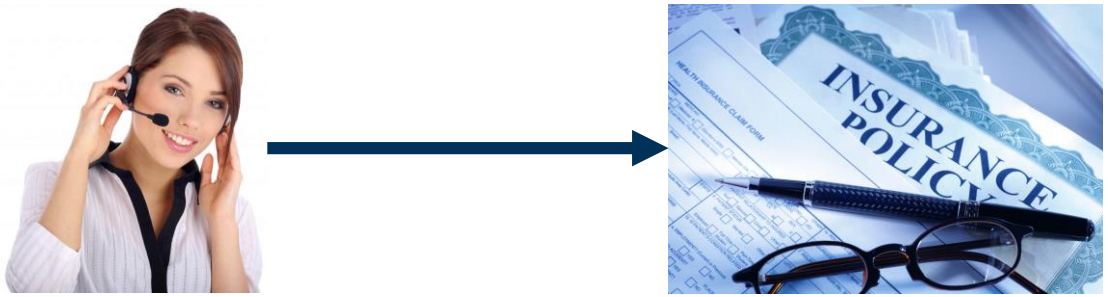
Set 1: Predictive Marketing - Campaign on car insurance

A bank wants to sell car insurances to its customers, your task is to predict whether a certain customer will subscribe to an insurance or not.

18 Features (incl. one ID) & one target variable (“yes”, “no”)

Features give information in socioeconomic status (age, job, marital, education), financial information (default, balance, HHinsurance, CarLoan) and information about the current and a previous campaign on this customer (Communication, LastContactMonth, etc.)



Feature	Description	Example
Id	Unique ID number. Predictions file should contain this feature.	“1” … “5000”
Age	Age of the client	
Job	Job of the client.	"admin.", "blue-collar", etc.
Marital	Marital status of the client	"divorced", "married", "single"
Education	Education level of the client	"primary", "secondary", etc.
Default	Has credit in default?	"yes" - 1,"no" - 0
Balance	Average yearly balance, in USD	
HHInsurance	Is household insured	"yes" - 1,"no" - 0
CarLoan	Has the client a car loan	"yes" - 1,"no" - 0
Communication	Contact communication type	"cellular", "telephone", “NA”
LastContactMonth	Month of the last contact	"jan", "feb", etc.
LastContactDay	Day of the last contact	
CallStart	Start time of the last call (HH:MM:SS)	12:43:15
CallEnd	End time of the last call (HH:MM:SS)	12:43:15
NoOfContacts	Number of contacts performed during this campaign for this client	
DaysPassed	Number of days that passed by after the client was last contacted from a previous campaign (numeric; -1 means client was not previously contacted)	
PrevAttempts	Number of contacts performed before this campaign and for this client	
Outcome	Outcome of the previous marketing campaign	"failure", "other", "success", “NA”
CarInsurance	Has the client subscribed a CarInsurance?	"yes" - 1,"no" - 0

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Reproducibility

1. Set seed!

2. Before your submission: Clear the environment and execute the whole script from the beginning. Otherwise the e.g. the repeated call of functions could lead to different results

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Submission

1. Do not change order of ID / rows in the test set. Submission must contain all instances of the original test data set.

2. Export the file according to the script (Format: Id, predictions)

3. Prediction file must match with the corresponding R script

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Starting with Support

Have fun!