

Ridge and Lasso Regression

CASE

ACTIVE LEARNING

BUSINESS PROBLEM

This is a dataset from one bank in the United States. Besides usual services, this bank also provides car insurance services. The bank organizes regular campaigns to attract new clients. The bank has potential customers' data, and bank's employees call them for advertising available car insurance options. We are provided with general information about clients (age, job, etc.) as well as more specific information about the current insurance sell campaign (communication, last contact day) and previous campaigns (attributes like previous attempts, outcome).

You have data about 4000 customers who were contacted during the last campaign and for whom the results of campaign (did the customer buy insurance or not) are known.

CLASSIFICATION TASK

The task is to predict for 1000 customers who were contacted during the current campaign, whether they will buy car insurance or not.

We will be using logistic Regression with Ridge penalty to predict it

FEATURE OVERVIEW

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