Bank Marketing Dataset - Extracted Contents

bank-names.txt

Citation Request:

This dataset is public available for research. The details are described in [Moro et al., 2011].

Please include this citation if you plan to use this database:

[Moro et al., 2011] S. Moro, R. Laureano and P. Cortez. Using Data Mining for Bank Direct Marketing: An Application of

the CRISP-DM Methodology.

In P. Novais et al. (Eds.), Proceedings of the European Simulation and Modelling Conference - ESM'2011, pp. 117-121,

Guimarães, Portugal, October, 2011. EUROSIS.

Available at: [pdf] http://hdl.handle.net/1822/14838

[bib] http://www3.dsi.uminho.pt/pcortez/bib/2011-esm-1.txt

1. Title: Bank Marketing

2. Sources

Created by: Paulo Cortez (Univ. Minho) and Sérgio Moro (ISCTE-IUL) @ 2012

3. Past Usage:

The full dataset was described and analyzed in:

S. Moro, R. Laureano and P. Cortez. Using Data Mining for Bank Direct Marketing: An Application of the CRISP-DM

Methodology.

In P. Novais et al. (Eds.), Proceedings of the European Simulation and Modelling Conference - ESM'2011, pp. 117-121,

Guimarães,

Portugal, October, 2011. EUROSIS.

4. Relevant Information:

The data is related with direct marketing campaigns of a Portuguese banking institution.

The marketing campaigns were based on phone calls. Often, more than one contact to the same client was required,

in order to access if the product (bank term deposit) would be (or not) subscribed.

There are two datasets:

1) bank-full.csv with all examples, ordered by date (from May 2008 to November 2010).

2) bank.csv with 10% of the examples (4521), randomly selected from bank-full.csv.

The smallest dataset is provided to test more computationally demanding machine learning algorithms (e.g. SVM).

The classification goal is to predict if the client will subscribe a term deposit (variable y).

5. Number of Instances: 45211 for bank-full.csv (4521 for bank.csv)

6. Number of Attributes: 16 + output attribute.

7. Attribute information:

For more information, read [Moro et al., 2011].

Input variables:

bank client data:

1 - age (numeric)

2 - job : type of job (categorical:

"admin.","unknown","unemployed","management","housemaid","entrepreneur","student",

"blue-collar","self-employed","retired","technician","services")

3 - marital : marital status (categorical: "married","divorced","single"; note: "divorced" means divorced or widowed)

4 - education (categorical: "unknown","secondary","primary","tertiary")

5 - default: has credit in default? (binary: "yes","no")

6 - balance: average yearly balance, in euros (numeric)

7 - housing: has housing loan? (binary: "yes","no")

8 - loan: has personal loan? (binary: "yes","no")

related with the last contact of the current campaign:

9 - contact: contact communication type (categorical: "unknown","telephone","cellular")

10 - day: last contact day of the month (numeric)

11 - month: last contact month of year (categorical: "jan", "feb", "mar", ..., "nov", "dec")

12 - duration: last contact duration, in seconds (numeric)

other attributes:

13 - campaign: number of contacts performed during this campaign and for this client (numeric, includes last contact)

14 - pdays: number of days that passed by after the client was last contacted from a previous campaign (numeric, -1 means client was not previously contacted)

15 - previous: number of contacts performed before this campaign and for this client (numeric)

16 - poutcome: outcome of the previous marketing campaign (categorical: "unknown","other","failure","success")

Output variable (desired target):

17 - y - has the client subscribed a term deposit? (binary: "yes","no")

8. Missing Attribute Values: None

bank.csv (preview)

"age";"job";"marital";"education";"default";"balance";"housing";"loan";"contact";"day";"month";"duration";"campaign";"pdays";"previous";"poutcome";"y"

30;"unemployed";"married";"primary";"no";1787;"no";"no";"cellular";19;"oct";79;1;-1;0;"unknown";"no"

33;"services";"married";"secondary";"no";4789;"yes";"yes";"cellular";11;"may";220;1;339;4;"failure";"no"

35;"management";"single";"tertiary";"no";1350;"yes";"no";"cellular";16;"apr";185;1;330;1;"failure";"no"

30;"management";"married";"tertiary";"no";1476;"yes";"yes";"unknown";3;"jun";199;4;-1;0;"unknown";"no"

59;"blue-collar";"married";"secondary";"no";0;"yes";"no";"unknown";5;"may";226;1;-1;0;"unknown";"no"

35;"management";"single";"tertiary";"no";747;"no";"no";"cellular";23;"feb";141;2;176;3;"failure";"no"

36;"self-employed";"married";"tertiary";"no";307;"yes";"no";"cellular";14;"may";341;1;330;2;"other";"no"

39;"technician";"married";"secondary";"no";147;"yes";"no";"cellular";6;"may";151;2;-1;0;"unknown";"no"

41;"entrepreneur";"married";"tertiary";"no";221;"yes";"no";"unknown";14;"may";57;2;-1;0;"unknown";"no"

43;"services";"married";"primary";"no";-88;"yes";"yes";"cellular";17;"apr";313;1;147;2;"failure";"no"

39;"services";"married";"secondary";"no";9374;"yes";"no";"unknown";20;"may";273;1;-1;0;"unknown";"no"

43;"admin.";"married";"secondary";"no";264;"yes";"no";"cellular";17;"apr";113;2;-1;0;"unknown";"no"

36;"technician";"married";"tertiary";"no";1109;"no";"no";"cellular";13;"aug";328;2;-1;0;"unknown";"no"

20;"student";"single";"secondary";"no";502;"no";"no";"cellular";30;"apr";261;1;-1;0;"unknown";"yes"

31;"blue-collar";"married";"secondary";"no";360;"yes";"yes";"cellular";29;"jan";89;1;241;1;"failure";"no"

40;"management";"married";"tertiary";"no";194;"no";"yes";"cellular";29;"aug";189;2;-1;0;"unknown";"no"

56;"technician";"married";"secondary";"no";4073;"no";"no";"cellular";27;"aug";239;5;-1;0;"unknown";"no"

37;"admin.";"single";"tertiary";"no";2317;"yes";"no";"cellular";20;"apr";114;1;152;2;"failure";"no"

25;"blue-collar";"single";"primary";"no";-221;"yes";"no";"unknown";23;"may";250;1;-1;0;"unknown";"no"

31;"services";"married";"secondary";"no";132;"no";"no";"cellular";7;"jul";148;1;152;1;"other";"no"

38;"management";"divorced";"unknown";"no";0;"yes";"no";"cellular";18;"nov";96;2;-1;0;"unknown";"no"

42;"management";"divorced";"tertiary";"no";16;"no";"no";"cellular";19;"nov";140;3;-1;0;"unknown";"no"

44;"services";"single";"secondary";"no";106;"no";"no";"unknown";12;"jun";109;2;-1;0;"unknown";"no"

44;"entrepreneur";"married";"secondary";"no";93;"no";"no";"cellular";7;"jul";125;2;-1;0;"unknown";"no"

26;"housemaid";"married";"tertiary";"no";543;"no";"no";"cellular";30;"jan";169;3;-1;0;"unknown";"no"

41;"management";"married";"tertiary";"no";5883;"no";"no";"cellular";20;"nov";182;2;-1;0;"unknown";"no"

55;"blue-collar";"married";"primary";"no";627;"yes";"no";"unknown";5;"may";247;1;-1;0;"unknown";"no"

67;"retired";"married";"unknown";"no";696;"no";"no";"telephone";17;"aug";119;1;105;2;"failure";"no"

56;"self-employed";"married";"secondary";"no";784;"no";"yes";"cellular";30;"jul";149;2;-1;0;"unknown";"no"

53;"admin.";"married";"secondary";"no";105;"no";"yes";"cellular";21;"aug";74;2;-1;0;"unknown";"no"

68;"retired";"divorced";"secondary";"no";4189;"no";"no";"telephone";14;"jul";897;2;-1;0;"unknown";"yes"

31;"technician";"married";"secondary";"no";171;"no";"no";"cellular";27;"aug";81;3;-1;0;"unknown";"no"

59;"management";"married";"secondary";"no";42;"no";"no";"cellular";21;"nov";40;1;-1;0;"unknown";"no"

32;"management";"single";"tertiary";"no";2536;"yes";"no";"cellular";26;"aug";958;6;-1;0;"unknown";"yes"

49;"technician";"married";"tertiary";"no";1235;"no";"no";"cellular";13;"aug";354;3;-1;0;"unknown";"yes"

42;"admin.";"divorced";"secondary";"no";1811;"yes";"no";"unknown";14;"may";150;1;-1;0;"unknown";"no"

78;"retired";"divorced";"primary";"no";229;"no";"no";"telephone";22;"oct";97;1;-1;0;"unknown";"yes"

32;"blue-collar";"married";"secondary";"no";2089;"yes";"no";"cellular";14;"nov";132;1;-1;0;"unknown";"yes"

33;"management";"married";"secondary";"no";3935;"yes";"no";"cellular";6;"may";765;1;342;2;"failure";"yes"

23;"services";"single";"tertiary";"no";363;"yes";"no";"unknown";30;"may";16;18;-1;0;"unknown";"no"

38;"management";"single";"tertiary";"no";11971;"yes";"no";"unknown";17;"nov";609;2;101;3;"failure";"no"

36;"management";"single";"tertiary";"no";553;"no";"no";"cellular";11;"aug";106;2;-1;0;"unknown";"no"

52;"blue-collar";"married";"secondary";"no";1117;"yes";"no";"cellular";13;"may";365;1;-1;0;"unknown";"no"

32;"technician";"married";"tertiary";"no";396;"yes";"no";"cellular";13;"may";205;3;-1;0;"unknown";"no"

32;"technician";"single";"tertiary";"no";2204;"yes";"no";"cellular";21;"nov";11;4;-1;0;"unknown";"no"

34;"management";"single";"tertiary";"no";872;"yes";"no";"unknown";7;"may";105;2;-1;0;"unknown";"no"

55;"blue-collar";"married";"primary";"no";145;"no";"no";"telephone";2;"feb";59;3;5;2;"other";"no"

26;"blue-collar";"married";"primary";"no";0;"yes";"no";"unknown";21;"may";425;1;-1;0;"unknown";"no"

32;"entrepreneur";"single";"primary";"yes";-849;"yes";"yes";"cellular";4;"feb";204;1;-1;0;"unknown";"no"

61;"admin.";"married";"unknown";"no";4629;"yes";"no";"cellular";27;"jan";181;1;92;1;"success";"yes"

45;"blue-collar";"divorced";"primary";"no";844;"no";"no";"unknown";5;"jun";1018;3;-1;0;"unknown";"yes"

37;"technician";"single";"secondary";"no";228;"yes";"no";"cellular";20;"aug";1740;2;-1;0;"unknown";"no"

38;"technician";"single";"secondary";"no";50;"no";"no";"cellular";29;"aug";98;2;-1;0;"unknown";"no"

34;"technician";"married";"tertiary";"no";1539;"yes";"no";"cellular";15;"jun";441;1;56;1;"other";"yes"

53;"blue-collar";"married";"secondary";"no";2231;"yes";"no";"cellular";14;"jul";272;3;-1;0;"unknown";"no"

48;"admin.";"married";"secondary";"no";3064;"yes";"no";"telephone";15;"jul";159;2;-1;0;"unknown";"no"

57;"management";"married";"secondary";"no";82;"no";"yes";"telephone";4;"feb";140;1;-1;0;"unknown";"no"

33;"self-employed";"single";"tertiary";"no";2155;"no";"no";"cellular";17;"nov";295;1;-1;0;"unknown";"no"

36;"retired";"single";"secondary";"no";101;"yes";"yes";"unknown";26;"may";314;1;-1;0;"unknown";"no"

54;"technician";"divorced";"secondary";"no";784;"yes";"yes";"unknown";15;"may";579;1;-1;0;"unknown";"no"

41;"blue-collar";"married";"primary";"no";-516;"no";"yes";"telephone";8;"jul";554;3;-1;0;"unknown";"no"

63;"retired";"married";"secondary";"no";415;"yes";"no";"cellular";7;"oct";323;1;-1;0;"unknown";"no"

48;"management";"married";"tertiary";"no";5887;"no";"no";"cellular";13;"aug";227;2;-1;0;"unknown";"no"

48;"services";"married";"secondary";"no";1355;"no";"no";"cellular";4;"jul";134;2;-1;0;"unknown";"no"

56;"admin.";"married";"secondary";"no";16873;"no";"no";"cellular";7;"oct";223;1;-1;0;"unknown";"no"

51;"blue-collar";"divorced";"secondary";"no";203;"yes";"no";"cellular";8;"may";134;1;170;5;"failure";"no"

31;"services";"married";"secondary";"no";338;"yes";"no";"cellular";28;"jan";155;1;-1;0;"unknown";"no"

29;"technician";"married";"secondary";"no";444;"yes";"no";"cellular";21;"jul";130;4;-1;0;"unknown";"no"

41;"management";"married";"secondary";"no";0;"no";"yes";"cellular";7;"jul";630;3;-1;0;"unknown";"no"

32;"technician";"single";"tertiary";"no";360;"no";"no";"cellular";19;"nov";164;2;-1;0;"unknown";"no"

37;"management";"married";"tertiary";"no";0;"no";"no";"cellular";16;"jul";268;2;182;3;"success";"yes"

42;"entrepreneur";"divorced";"tertiary";"yes";2;"yes";"no";"unknown";5;"may";380;1;-1;0;"unknown";"no"

31;"management";"single";"tertiary";"no";6248;"yes";"no";"unknown";9;"may";154;2;-1;0;"unknown";"no"

41;"services";"married";"tertiary";"no";412;"yes";"no";"unknown";3;"jun";154;5;-1;0;"unknown";"no"

56;"retired";"married";"secondary";"no";344;"yes";"no";"unknown";15;"may";221;1;-1;0;"unknown";"no"

54;"management";"divorced";"tertiary";"no";3222;"no";"no";"cellular";14;"aug";67;2;-1;0;"unknown";"no"

41;"blue-collar";"divorced";"secondary";"no";174;"yes";"no";"cellular";14;"may";367;2;297;1;"other";"no"

40;"technician";"single";"secondary";"no";591;"no";"yes";"cellular";14;"aug";87;6;-1;0;"unknown";"no"

50;"blue-collar";"divorced";"primary";"no";388;"no";"no";"cellular";5;"feb";701;1;-1;0;"unknown";"no"

40;"unemployed";"married";"secondary";"no";219;"yes";"no";"cellular";17;"nov";204;2;196;1;"failure";"no"

27;"admin.";"divorced";"secondary";"no";451;"yes";"no";"cellular";16;"jul";652;1;-1;0;"unknown";"yes"

60;"retired";"married";"primary";"no";5;"no";"no";"cellular";26;"aug";63;2;-1;0;"unknown";"no"

28;"admin.";"single";"secondary";"no";177;"yes";"yes";"cellular";6;"may";150;1;-1;0;"unknown";"no"

52;"services";"married";"secondary";"no";657;"no";"no";"telephone";7;"jul";398;2;460;2;"failure";"yes"

37;"management";"married";"tertiary";"no";1315;"no";"no";"cellular";30;"jun";224;1;-1;0;"unknown";"yes"

51;"blue-collar";"married";"primary";"no";1466;"yes";"no";"unknown";7;"may";406;2;-1;0;"unknown";"no"

41;"technician";"single";"secondary";"no";879;"no";"yes";"cellular";7;"jul";60;4;-1;0;"unknown";"no"

35;"blue-collar";"single";"primary";"no";293;"yes";"no";"unknown";30;"may";521;2;-1;0;"unknown";"no"

38;"admin.";"married";"secondary";"no";424;"yes";"no";"cellular";17;"apr";279;1;-1;0;"unknown";"no"

34;"blue-collar";"married";"secondary";"no";1831;"yes";"no";"unknown";20;"may";203;2;-1;0;"unknown";"no"

39;"blue-collar";"married";"primary";"no";111;"no";"no";"cellular";18;"nov";201;2;-1;0;"unknown";"no"

34;"blue-collar";"married";"primary";"no";455;"yes";"no";"unknown";20;"jun";372;3;-1;0;"unknown";"no"

27;"services";"single";"secondary";"no";-195;"yes";"no";"cellular";18;"may";391;1;-1;0;"unknown";"yes"

32;"management";"single";"tertiary";"no";3616;"no";"no";"cellular";14;"aug";165;2;-1;0;"unknown";"no"

57;"blue-collar";"married";"secondary";"no";14093;"no";"no";"cellular";11;"aug";231;5;-1;0;"unknown";"no"

41;"unknown";"single";"tertiary";"no";1567;"no";"no";"cellular";1;"jul";291;2;-1;0;"unknown";"no"

41;"admin.";"married";"tertiary";"no";5426;"yes";"no";"unknown";14;"may";149;2;-1;0;"unknown";"no"

30;"admin.";"single";"tertiary";"no";261;"no";"no";"cellular";19;"oct";233;1;137;20;"failure";"no"

36;"blue-collar";"divorced";"secondary";"no";2843;"no";"no";"cellular";12;"feb";473;1;182;1;"success";"no"

... (truncated after 100 lines)

bank-full.csv (preview)

"age";"job";"marital";"education";"default";"balance";"housing";"loan";"contact";"day";"month";"duration";"campaign";"pdays";"previous";"poutcome";"y"

58;"management";"married";"tertiary";"no";2143;"yes";"no";"unknown";5;"may";261;1;-1;0;"unknown";"no"

44;"technician";"single";"secondary";"no";29;"yes";"no";"unknown";5;"may";151;1;-1;0;"unknown";"no"

33;"entrepreneur";"married";"secondary";"no";2;"yes";"yes";"unknown";5;"may";76;1;-1;0;"unknown";"no"

47;"blue-collar";"married";"unknown";"no";1506;"yes";"no";"unknown";5;"may";92;1;-1;0;"unknown";"no"

33;"unknown";"single";"unknown";"no";1;"no";"no";"unknown";5;"may";198;1;-1;0;"unknown";"no"

35;"management";"married";"tertiary";"no";231;"yes";"no";"unknown";5;"may";139;1;-1;0;"unknown";"no"

28;"management";"single";"tertiary";"no";447;"yes";"yes";"unknown";5;"may";217;1;-1;0;"unknown";"no"

42;"entrepreneur";"divorced";"tertiary";"yes";2;"yes";"no";"unknown";5;"may";380;1;-1;0;"unknown";"no"

58;"retired";"married";"primary";"no";121;"yes";"no";"unknown";5;"may";50;1;-1;0;"unknown";"no"

43;"technician";"single";"secondary";"no";593;"yes";"no";"unknown";5;"may";55;1;-1;0;"unknown";"no"

41;"admin.";"divorced";"secondary";"no";270;"yes";"no";"unknown";5;"may";222;1;-1;0;"unknown";"no"

29;"admin.";"single";"secondary";"no";390;"yes";"no";"unknown";5;"may";137;1;-1;0;"unknown";"no"

53;"technician";"married";"secondary";"no";6;"yes";"no";"unknown";5;"may";517;1;-1;0;"unknown";"no"

58;"technician";"married";"unknown";"no";71;"yes";"no";"unknown";5;"may";71;1;-1;0;"unknown";"no"

57;"services";"married";"secondary";"no";162;"yes";"no";"unknown";5;"may";174;1;-1;0;"unknown";"no"

51;"retired";"married";"primary";"no";229;"yes";"no";"unknown";5;"may";353;1;-1;0;"unknown";"no"

45;"admin.";"single";"unknown";"no";13;"yes";"no";"unknown";5;"may";98;1;-1;0;"unknown";"no"

57;"blue-collar";"married";"primary";"no";52;"yes";"no";"unknown";5;"may";38;1;-1;0;"unknown";"no"

60;"retired";"married";"primary";"no";60;"yes";"no";"unknown";5;"may";219;1;-1;0;"unknown";"no"

33;"services";"married";"secondary";"no";0;"yes";"no";"unknown";5;"may";54;1;-1;0;"unknown";"no"

28;"blue-collar";"married";"secondary";"no";723;"yes";"yes";"unknown";5;"may";262;1;-1;0;"unknown";"no"

56;"management";"married";"tertiary";"no";779;"yes";"no";"unknown";5;"may";164;1;-1;0;"unknown";"no"

32;"blue-collar";"single";"primary";"no";23;"yes";"yes";"unknown";5;"may";160;1;-1;0;"unknown";"no"

25;"services";"married";"secondary";"no";50;"yes";"no";"unknown";5;"may";342;1;-1;0;"unknown";"no"

40;"retired";"married";"primary";"no";0;"yes";"yes";"unknown";5;"may";181;1;-1;0;"unknown";"no"

44;"admin.";"married";"secondary";"no";-372;"yes";"no";"unknown";5;"may";172;1;-1;0;"unknown";"no"

39;"management";"single";"tertiary";"no";255;"yes";"no";"unknown";5;"may";296;1;-1;0;"unknown";"no"

52;"entrepreneur";"married";"secondary";"no";113;"yes";"yes";"unknown";5;"may";127;1;-1;0;"unknown";"no"

46;"management";"single";"secondary";"no";-246;"yes";"no";"unknown";5;"may";255;2;-1;0;"unknown";"no"

36;"technician";"single";"secondary";"no";265;"yes";"yes";"unknown";5;"may";348;1;-1;0;"unknown";"no"

57;"technician";"married";"secondary";"no";839;"no";"yes";"unknown";5;"may";225;1;-1;0;"unknown";"no"

49;"management";"married";"tertiary";"no";378;"yes";"no";"unknown";5;"may";230;1;-1;0;"unknown";"no"

60;"admin.";"married";"secondary";"no";39;"yes";"yes";"unknown";5;"may";208;1;-1;0;"unknown";"no"

59;"blue-collar";"married";"secondary";"no";0;"yes";"no";"unknown";5;"may";226;1;-1;0;"unknown";"no"

51;"management";"married";"tertiary";"no";10635;"yes";"no";"unknown";5;"may";336;1;-1;0;"unknown";"no"

57;"technician";"divorced";"secondary";"no";63;"yes";"no";"unknown";5;"may";242;1;-1;0;"unknown";"no"

25;"blue-collar";"married";"secondary";"no";-7;"yes";"no";"unknown";5;"may";365;1;-1;0;"unknown";"no"

53;"technician";"married";"secondary";"no";-3;"no";"no";"unknown";5;"may";1666;1;-1;0;"unknown";"no"

36;"admin.";"divorced";"secondary";"no";506;"yes";"no";"unknown";5;"may";577;1;-1;0;"unknown";"no"

37;"admin.";"single";"secondary";"no";0;"yes";"no";"unknown";5;"may";137;1;-1;0;"unknown";"no"

44;"services";"divorced";"secondary";"no";2586;"yes";"no";"unknown";5;"may";160;1;-1;0;"unknown";"no"

50;"management";"married";"secondary";"no";49;"yes";"no";"unknown";5;"may";180;2;-1;0;"unknown";"no"

60;"blue-collar";"married";"unknown";"no";104;"yes";"no";"unknown";5;"may";22;1;-1;0;"unknown";"no"

54;"retired";"married";"secondary";"no";529;"yes";"no";"unknown";5;"may";1492;1;-1;0;"unknown";"no"

58;"retired";"married";"unknown";"no";96;"yes";"no";"unknown";5;"may";616;1;-1;0;"unknown";"no"

36;"admin.";"single";"primary";"no";-171;"yes";"no";"unknown";5;"may";242;1;-1;0;"unknown";"no"

58;"self-employed";"married";"tertiary";"no";-364;"yes";"no";"unknown";5;"may";355;1;-1;0;"unknown";"no"

44;"technician";"married";"secondary";"no";0;"yes";"no";"unknown";5;"may";225;2;-1;0;"unknown";"no"

55;"technician";"divorced";"secondary";"no";0;"no";"no";"unknown";5;"may";160;1;-1;0;"unknown";"no"

29;"management";"single";"tertiary";"no";0;"yes";"no";"unknown";5;"may";363;1;-1;0;"unknown";"no"

54;"blue-collar";"married";"secondary";"no";1291;"yes";"no";"unknown";5;"may";266;1;-1;0;"unknown";"no"

48;"management";"divorced";"tertiary";"no";-244;"yes";"no";"unknown";5;"may";253;1;-1;0;"unknown";"no"

32;"management";"married";"tertiary";"no";0;"yes";"no";"unknown";5;"may";179;1;-1;0;"unknown";"no"

42;"admin.";"single";"secondary";"no";-76;"yes";"no";"unknown";5;"may";787;1;-1;0;"unknown";"no"

24;"technician";"single";"secondary";"no";-103;"yes";"yes";"unknown";5;"may";145;1;-1;0;"unknown";"no"

38;"entrepreneur";"single";"tertiary";"no";243;"no";"yes";"unknown";5;"may";174;1;-1;0;"unknown";"no"

38;"management";"single";"tertiary";"no";424;"yes";"no";"unknown";5;"may";104;1;-1;0;"unknown";"no"

47;"blue-collar";"married";"unknown";"no";306;"yes";"no";"unknown";5;"may";13;1;-1;0;"unknown";"no"

40;"blue-collar";"single";"unknown";"no";24;"yes";"no";"unknown";5;"may";185;1;-1;0;"unknown";"no"

46;"services";"married";"primary";"no";179;"yes";"no";"unknown";5;"may";1778;1;-1;0;"unknown";"no"

32;"admin.";"married";"tertiary";"no";0;"yes";"no";"unknown";5;"may";138;1;-1;0;"unknown";"no"

53;"technician";"divorced";"secondary";"no";989;"yes";"no";"unknown";5;"may";812;1;-1;0;"unknown";"no"

57;"blue-collar";"married";"primary";"no";249;"yes";"no";"unknown";5;"may";164;1;-1;0;"unknown";"no"

33;"services";"married";"secondary";"no";790;"yes";"no";"unknown";5;"may";391;1;-1;0;"unknown";"no"

49;"blue-collar";"married";"unknown";"no";154;"yes";"no";"unknown";5;"may";357;1;-1;0;"unknown";"no"

51;"management";"married";"tertiary";"no";6530;"yes";"no";"unknown";5;"may";91;1;-1;0;"unknown";"no"

60;"retired";"married";"tertiary";"no";100;"no";"no";"unknown";5;"may";528;1;-1;0;"unknown";"no"

59;"management";"divorced";"tertiary";"no";59;"yes";"no";"unknown";5;"may";273;1;-1;0;"unknown";"no"

55;"technician";"married";"secondary";"no";1205;"yes";"no";"unknown";5;"may";158;2;-1;0;"unknown";"no"

35;"blue-collar";"single";"secondary";"no";12223;"yes";"yes";"unknown";5;"may";177;1;-1;0;"unknown";"no"

57;"blue-collar";"married";"secondary";"no";5935;"yes";"yes";"unknown";5;"may";258;1;-1;0;"unknown";"no"

31;"services";"married";"secondary";"no";25;"yes";"yes";"unknown";5;"may";172;1;-1;0;"unknown";"no"

54;"management";"married";"secondary";"no";282;"yes";"yes";"unknown";5;"may";154;1;-1;0;"unknown";"no"

55;"blue-collar";"married";"primary";"no";23;"yes";"no";"unknown";5;"may";291;1;-1;0;"unknown";"no"

43;"technician";"married";"secondary";"no";1937;"yes";"no";"unknown";5;"may";181;1;-1;0;"unknown";"no"

53;"technician";"married";"secondary";"no";384;"yes";"no";"unknown";5;"may";176;1;-1;0;"unknown";"no"

44;"blue-collar";"married";"secondary";"no";582;"no";"yes";"unknown";5;"may";211;1;-1;0;"unknown";"no"

55;"services";"divorced";"secondary";"no";91;"no";"no";"unknown";5;"may";349;1;-1;0;"unknown";"no"

49;"services";"divorced";"secondary";"no";0;"yes";"yes";"unknown";5;"may";272;1;-1;0;"unknown";"no"

55;"services";"divorced";"secondary";"yes";1;"yes";"no";"unknown";5;"may";208;1;-1;0;"unknown";"no"

45;"admin.";"single";"secondary";"no";206;"yes";"no";"unknown";5;"may";193;1;-1;0;"unknown";"no"

47;"services";"divorced";"secondary";"no";164;"no";"no";"unknown";5;"may";212;1;-1;0;"unknown";"no"

42;"technician";"single";"secondary";"no";690;"yes";"no";"unknown";5;"may";20;1;-1;0;"unknown";"no"

59;"admin.";"married";"secondary";"no";2343;"yes";"no";"unknown";5;"may";1042;1;-1;0;"unknown";"yes"

46;"self-employed";"married";"tertiary";"no";137;"yes";"yes";"unknown";5;"may";246;1;-1;0;"unknown";"no"

51;"blue-collar";"married";"primary";"no";173;"yes";"no";"unknown";5;"may";529;2;-1;0;"unknown";"no"

56;"admin.";"married";"secondary";"no";45;"no";"no";"unknown";5;"may";1467;1;-1;0;"unknown";"yes"

41;"technician";"married";"secondary";"no";1270;"yes";"no";"unknown";5;"may";1389;1;-1;0;"unknown";"yes"

46;"management";"divorced";"secondary";"no";16;"yes";"yes";"unknown";5;"may";188;2;-1;0;"unknown";"no"

57;"retired";"married";"secondary";"no";486;"yes";"no";"unknown";5;"may";180;2;-1;0;"unknown";"no"

42;"management";"single";"secondary";"no";50;"no";"no";"unknown";5;"may";48;1;-1;0;"unknown";"no"

30;"technician";"married";"secondary";"no";152;"yes";"yes";"unknown";5;"may";213;2;-1;0;"unknown";"no"

60;"admin.";"married";"secondary";"no";290;"yes";"no";"unknown";5;"may";583;1;-1;0;"unknown";"no"

60;"blue-collar";"married";"unknown";"no";54;"yes";"no";"unknown";5;"may";221;1;-1;0;"unknown";"no"

57;"entrepreneur";"divorced";"secondary";"no";-37;"no";"no";"unknown";5;"may";173;1;-1;0;"unknown";"no"

36;"management";"married";"tertiary";"no";101;"yes";"yes";"unknown";5;"may";426;1;-1;0;"unknown";"no"

55;"blue-collar";"married";"secondary";"no";383;"no";"no";"unknown";5;"may";287;1;-1;0;"unknown";"no"

60;"retired";"married";"tertiary";"no";81;"yes";"no";"unknown";5;"may";101;1;-1;0;"unknown";"no"

39;"technician";"married";"secondary";"no";0;"yes";"no";"unknown";5;"may";203;1;-1;0;"unknown";"no"

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