Description of the German credit data set

- 1. Title: German Credit data
- 2. Source Information

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3. Number of Instances: 1000

Two datasets are provided. The original dataset, in the form provided by Prof. Hofmann, contains categorical / symbolic attributes and is in the file german.data.

For algorithms that need numerical attributes, Strathclyde University produced the file german.data-numeric. This file has been edited and several indicator variables added to make it suitable for algorithms which cannot cope with categorical variables. Several attributes that are ordered categorical (such as attribute 17) have been coded as integer. This was the form used by StatLog.

- 4. Number of Attributes german: 20 (7 numerical, 13 categorical)
 Number of Attributes german.numer: 24 (24 numerical)
- 5. Attribute description for german

Attribute 1: (qualitative) Status of existing checking account

A11: value < 0 DM

 $A12: 0 \le value < 200 DM$

A13 : value ≥ 200 DM / salary assignments for at least 1 year

A14: no checking account

Attribute 2: (numerical) Duration in months

Attribute 3: (qualitative) Credit history

A30: no credits taken / all credits paid back duly

A31: all credits at this bank paid back duly

A32: existing credits paid back duly till now

A33: delay in paying off in the past

A34 : critical account / other credits existing (not at this bank)

Attribute 4: (qualitative) Purpose

A40 : car (new) A41 : car (used)

A42: furniture / equipment

A43 : radio / television

A44: domestic appliances

A45 : repairs A46 : education A47 : (vacation - does not exist?)

A48 : retraining A49 : business A410 : others

Attribute 5: (numerical) Credit amount

Attibute 6: (qualitative) Savings account / bonds

A61: value < 100 DM

A62 : $100 \le \text{value} < 500 \text{ DM}$ A63 : $500 \le \text{value} < 1000 \text{ DM}$

A64: value ≥ 1000 DM

A65: unknown / no savings account

Attribute 7: (qualitative) Present employment since

A71 : unemployed A72 : time < 1 year

A73: $1 \le \text{time} < 4 \text{ years}$ A74: $4 \le \text{time} < 7 \text{ years}$

A75: time \geq 7 years

Attribute 8: (numerical) Installment rate in percentage of disposable income

Attribute 9: (qualitative) Personal status and sex

A91: male: divorced/separated

A92: female: divorced / separated / married

A93: male: single

A94: male: married/widowed

A95: female: single

Attribute 10: (qualitative) Other debtors / guarantors

A101: none

A102 : co-applicant A103 : guarantor

Attribute 11: (numerical) Present residence since

Attribute 12: (qualitative) Property

A121: real estate

A122: if not A121: building society savings agreement / life insurance

A123: if not A121/A122: car or other, not in attribute 6

A124: unknown / no property

Attribute 13: (numerical) Age in years

Attribute 14: (qualitative) Other installment plans

A141 : bank A142 : stores A143 : none

Attribute 15: (qualitative) Housing

A151: rent

A152 : own A153 : for free

Attribute 16: (numerical) Number of existing credits at this bank

Attribute 17: (qualitative) Job

A171: unemployed / unskilled - non-resident

A172: unskilled - resident

A173: skilled employee / official

A174: management / self-employed / highly qualified employee / officer

Attribute 18: (numerical) Number of people being liable to provide maintenance for

Attribute 19: (qualitative) Telephone

A191: none

A192: yes, registered under the customers name

Attribute 20: (qualitative) foreign worker

A201 : yes A202 : no

6. Cost Matrix

This dataset requires use of a cost matrix (see below)

	Good	Bad
Good	0	1
Bad	5	0

The rows represent the actual classification and the columns the predicted classification. It is worse to class a customer as good when they are bad (5), than it is to class a customer as bad when they are good (1).