**Data Set Name:**

Absenteeism at work - Part I

**Abstract:**

The database was created with records of absenteeism at work from July 2007 to July 2010 at a courier company in Brazil.

**Source:**

Creators original owner and donors: Andrea Martiniano (1), Ricardo Pinto Ferreira (2), and Renato Jose Sassi (3).

E-mail address:

andrea.martiniano'@'gmail.com (1) - PhD student;

log.kasparov'@'gmail.com (2) - PhD student;

sassi'@'uni9.pro.br (3) - Prof. Doctor.

Universidade Nove de Julho - Postgraduate Program in Informatics and Knowledge Management.

Address: Rua Vergueiro, 235/249 Liberdade, Sao Paulo, SP, Brazil. Zip code: 01504-001.

Website: <http://www.uninove.br/curso/informatica-e-gestao-do-conhecimento/>

**Data Type:** Multivariate   Univariate   Sequential   Time-Series   Text   Domain-Theory

**Task:** Classification   Regression   Clustering   Causal Discovery

**Attribute Type:** Categorical   Integer   Real

**Area:**Life Sciences Physical Sciences CS / Engineering Social Sciences Business Game Other

**Format Type:**Matrix Non-Matrix

**Does your data set contain missing values?** Yes No

**Number of Instances (records in your data set):** 

**Number of Attributes (fields within each record):** 

\*-\*-\*-\*-\*-\*

**Relevant Information:**

The data set allows for several new combinations of attributes and attribute exclusions, or the modification of the attribute type (categorical, integer, or real) depending on the purpose of the research.The data set (Absenteeism at work - Part I) was used in academic research at the Universidade Nove de Julho - Postgraduate Program in Informatics and Knowledge Management.

**Attribute Information:**

1. Individual identification (ID)

2. Reason for absence (ICD).

Absences attested by the International Code of Diseases (ICD) stratified into 21 categories (I to XXI) as follows:

I Certain infectious and parasitic diseases 🡪 0

II Neoplasms 🡪 1

III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism 🡪 2

IV Endocrine, nutritional and metabolic diseases 🡪 3

V Mental and behavioural disorders 🡪 4

VI Diseases of the nervous system 🡪 5

VII Diseases of the eye and adnexa 🡪 6

VIII Diseases of the ear and mastoid process 🡪 7

IX Diseases of the circulatory system 🡪 8

X Diseases of the respiratory system 🡪 9

XI Diseases of the digestive system 🡪 10

XII Diseases of the skin and subcutaneous tissue 🡪11

XIII Diseases of the musculoskeletal system and connective tissue 🡪 12

XIV Diseases of the genitourinary system 🡪13

XV Pregnancy, childbirth and the puerperium 🡪 14

XVI Certain conditions originating in the perinatal period 🡪 15

XVII Congenital malformations, deformations and chromosomal abnormalities 🡪 16

XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified🡪 17

XIX Injury, poisoning and certain other consequences of external causes 🡪 18

XX External causes of morbidity and mortality 🡪 19

XXI Factors influencing health status and contact with health services. 🡪 21

And 7 categories without (CID) patient follow-up (22), medical consultation (23), blood donation (24), laboratory examination (25), unjustified absence (26), physiotherapy (27), dental consultation (28).

3. Month of absence

4. Day of the week (Monday (2), Tuesday (3), Wednesday (4), Thursday (5), Friday (6))

5. Seasons (summer (1), autumn (2), winter (3), spring (4))

6. Transportation expense

7. Distance from Residence to Work (kilometers)

8. Service time

9. Age

10. Work load Average/day

11. Hit target

12. Disciplinary failure (yes=1; no=0)

13. Education (high school (1), graduate (2), postgraduate (3), master and doctor (4))

14. Son (number of children)

15. Social drinker (yes=1; no=0)

16. Social smoker (yes=1; no=0)

17. Pet (number of pet)

18. Weight

19. Height

20. Body mass index

21. Absenteeism time in hours (target)

.arff header for Weka:

@relation Absenteeism\_at\_work

@attribute ID {31.0, 27.0, 19.0, 30.0, 7.0, 20.0, 24.0, 32.0, 3.0, 33.0, 26.0, 29.0, 18.0, 25.0, 17.0, 14.0, 16.0, 23.0, 2.0, 21.0, 36.0, 15.0, 22.0, 5.0, 12.0, 9.0, 6.0, 34.0, 10.0, 28.0, 13.0, 11.0, 1.0, 4.0, 8.0, 35.0}

@attribute Reason\_for\_absence {17.0, 3.0, 15.0, 4.0, 21.0, 2.0, 9.0, 24.0, 18.0, 1.0, 12.0, 5.0, 16.0, 7.0, 27.0, 25.0, 8.0, 10.0, 26.0, 19.0, 28.0, 6.0, 23.0, 22.0, 13.0, 14.0, 11.0, 0.0}

@attribute Month\_of\_absence REAL

@attribute Day\_of\_the\_week {5.0, 2.0, 3.0, 4.0, 6.0}

@attribute Seasons {4.0, 1.0, 2.0, 3.0}

@attribute Transportation\_expense REAL

@attribute Distance\_from\_Residence\_to\_Work REAL

@attribute Service\_time INTEGER

@attribute Age INTEGER

@attribute Work\_load\_Average/day\_ REAL

@attribute Hit\_target REAL

@attribute Disciplinary\_failure {1.0, 0.0}

@attribute Education REAL

@attribute Son REAL

@attribute Social\_drinker {1.0, 0.0}

@attribute Social\_smoker {1.0, 0.0}

@attribute Pet REAL

@attribute Weight REAL

@attribute Height REAL

@attribute Body\_mass\_index REAL

@attribute Absenteeism\_time\_in\_hours REAL

**Relevant Papers:**

Martiniano, A., Ferreira, R. P., Sassi, R. J., & Affonso, C. (2012). Application of a neuro fuzzy network in prediction of absenteeism at work. In Information Systems and Technologies (CISTI), 7th Iberian Conference on (pp. 1-4). IEEE.

**Citation Requests / Acknowledgements:**

Martiniano, A., Ferreira, R. P., Sassi, R. J., & Affonso, C. (2012). Application of a neuro fuzzy network in prediction of absenteeism at work. In Information Systems and Technologies (CISTI), 7th Iberian Conference on (pp. 1-4). IEEE.

Acknowledgements:

Professor Gary Johns for contributing to the selection of relevant research attributes.

Professor Emeritus of Management

Honorary Concordia University Research Chair in Management

John Molson School of Business

Concordia University

Montreal, Quebec, Canada

Adjunct Professor, OB/HR Division

Sauder School of Business,

University of British Columbia

Vancouver, British Columbia, Canada