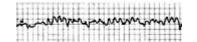


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Arrhythmia Data Set

Download: Data Folder, Data Set Description



Abstract: Distinguish between the presence and absence of cardiac arrhythmia and classify it in one of the 16 groups.

Data Set Characteristics:	Multivariate	Number of Instances:	452	Area:	Life
Attribute Characteristics:	Categorical, Integer, Real	Number of Attributes:	279	Date Donated	1998-01-01
Associated Tasks:	Classification	Missing Values?	Yes	Number of Web Hits:	299230

Source:

Original Owners of Database:

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1 z 4 2020-03-09, 10:39

Data Set Information:

This database contains 279 attributes, 206 of which are linear valued and the rest are nominal.

Concerning the study of H. Altay Guvenir: "The aim is to distinguish between the presence and absence of cardiac arrhythmia and to classify it in one of the 16 groups. Class 01 refers to 'normal' ECG classes 02 to 15 refers to different classes of arrhythmia and class 16 refers to the rest of unclassified ones. For the time being, there exists a computer program that makes such a classification. However there are differences between the cardiolog's and the programs classification. Taking the cardiolog's as a gold standard we aim to minimise this difference by means of machine learning tools."

The names and id numbers of the patients were recently removed from the database.

Attribute Information:

```
-- Complete attribute documentation:
```

1 Age: Age in years , linear

2 Sex: Sex (0 = male; 1 = female), nominal

3 Height: Height in centimeters , linear

4 Weight: Weight in kilograms, linear

5 QRS duration: Average of QRS duration in msec., linear

6 P-R interval: Average duration between onset of P and Q waves in msec., linear

7 Q-T interval: Average duration between onset of Q and offset of T waves in msec., linear

8 T interval: Average duration of T wave in msec., linear

9 P interval: Average duration of P wave in msec., linear

Vector angles in degrees on front plane of:, linear

10 QRS

11 T

12 P

13 QRST

14 J

15 Heart rate: Number of heart beats per minute, linear

Of channel DI:

Average width, in msec., of: linear

16 Q wave

17 R wave

18 S wave

19 R' wave, small peak just after R

20 S' wave

21 Number of intrinsic deflections, linear

22 Existence of ragged R wave, nominal

23 Existence of diphasic derivation of R wave, nominal

24 Existence of ragged P wave, nominal

25 Existence of diphasic derivation of P wave, nominal

26 Existence of ragged T wave, nominal

27 Existence of diphasic derivation of T wave, nominal

Of channel DII:

28 .. 39 (similar to 16 .. 27 of channel DI)

Of channels DIII:

40 .. 51

Of channel AVR:

52 .. 63

2 z 4 2020-03-09, 10:39

Of channel AVL: 64 .. 75 Of channel AVF: 76 .. 87 Of channel V1: 88 .. 99 Of channel V2: 100 .. 111 Of channel V3: 112 .. 123 Of channel V4: 124 .. 135 Of channel V5: 136 .. 147 Of channel V6: 148 .. 159 Of channel DI: Amplitude, * 0.1 milivolt, of 160 JJ wave, linear 161 Q wave, linear 162 R wave, linear 163 S wave, linear 164 R' wave, linear 165 S' wave, linear 166 P wave, linear 167 T wave, linear 168 QRSA, Sum of areas of all segments divided by 10, (Area= width * height / 2), linear 169 QRSTA = QRSA + 0.5 * width of T wave * 0.1 * height of T wave. (If T is diphasic then the bigger segment is considered), linear Of channel DII: 170 .. 179 Of channel DIII: 180 .. 189 Of channel AVR: 190 .. 199 Of channel AVL: 200 .. 209 Of channel AVF: 210 .. 219 Of channel V1: 220 .. 229 Of channel V2: 230 .. 239 Of channel V3: 240 .. 249 Of channel V4: 250 .. 259 Of channel V5:

Relevant Papers:

260 .. 269 Of channel V6: 270 .. 279

H. Altay Guvenir, Burak Acar, Gulsen Demiroz, Ayhan Cekin "A Supervised Machine Learning Algorithm for

3 z 4 2020-03-09, 10:39

Arrhythmia Analysis." Proceedings of the Computers in Cardiology Conference, Lund, Sweden, 1997. [Web Link]

Papers That Cite This Data Set¹:



Krista Lagus and Esa Alhoniemi and Jeremias Seppa and Antti Honkela and Arno Wagner. <u>INDEPENDENT VARIABLE GROUP ANALYSIS IN LEARNING COMPACT REPRESENTATIONS FOR DATA</u>. Neural Networks Research Centre, Helsinki University of Technology. <u>[View Context]</u>.

Gisele L. Pappa and Alex Alves Freitas and Celso A A Kaestner. <u>AMultiobjective Genetic Algorithm for Attribute Selection</u>. Computing Laboratory Pontificia Universidade Catolica do Parana University of Kent at Canterbury. [View Context].

Shay Cohen and Eytan Ruppin and Gideon Dror. <u>Feature Selection Based on the Shapley Value</u>. School of Computer Sciences Tel-Aviv University. <u>[View Context]</u>.

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[1] Papers were automatically harvested and associated with this data set, in collaboration with Rexa.info

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4 z 4 2020-03-09, 10:39