

به نام خدا

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## **Parkinson's Disease Detection Dataset**

### About Dataset

#### Parkinson's data set

This dataset is composed of a range of biomedical voice measurements from 31 people, 23 with Parkinson's disease (PD). Each column in the table is a particular voice measure, and each row corresponds one of 195 voice recording from these individuals ("name" column). The main aim of the data is to discriminate healthy people from those with PD, according to "status" column which is set to 0 for healthy and 1 for PD.

The data is in ASCII CSV format. The rows of the CSV file contain an instance corresponding to one voice recording. There are around six recordings per patient, the name of the patient is identified in the first column. For further information or to pass on comments, please contact Max Little (littlem '@' robots.ox.ac.uk).

Further details are contained in the following reference -- if you use this dataset, please cite:

Max A. Little, Patrick E. McSharry, Eric J. Hunter, Lorraine O. Ramig (2008), 'Suitability of dysphonia measurements for telemonitoring of Parkinson's disease', IEEE Transactions on Biomedical Engineering (to appear).

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This allows for the sharing and adaptation of the datasets for any purpose, provided that the appropriate credit is given.

### **Matrix column entries (attributes):**

name - ASCII subject name and recording number

MDVP:Fo(Hz) - Average vocal fundamental frequency

MDVP:Fhi(Hz) - Maximum vocal fundamental frequency

MDVP:Flo(Hz) - Minimum vocal fundamental frequency

Five measures of variation in Frequency

MDVP:Jitter(%) - Percentage of cycle-to-cycle variability of the period duration

MDVP:Jitter(Abs) - Absolute value of cycle-to-cycle variability of the period duration

MDVP:RAP - Relative measure of the pitch disturbance

MDVP:PPQ - Pitch perturbation quotient

Jitter:DDP - Average absolute difference of differences between jitter cycles

Six measures of variation in amplitude

MDVP:Shimmer - Variations in the voice amplitude

MDVP:Shimmer(dB) - Variations in the voice amplitude in dB

Shimmer:APQ3 - Three point amplitude perturbation quotient measured against the average of the three amplitude

Shimmer:APQ5 - Five point amplitude perturbation quotient measured against the average of the three amplitude

MDVP:APQ - Amplitude perturbation quotient from MDVP

Shimmer:DDA - Average absolute difference between the amplitudes of consecutive periods

Two measures of ratio of noise to tonal components in the voice

NHR - Noise-to-harmonics Ratio and

HNR - Harmonics-to-noise Ratio

status - Health status of the subject (one) - Parkinson's, (zero) - healthy

Two nonlinear dynamical complexity measures

RPDE - Recurrence period density entropy

D2 - correlation dimension

DFA - Signal fractal scaling exponent

Three nonlinear measures of fundamental frequency variation

spread1 - discrete probability distribution of occurrence of relative semitone variations

spread2 - Three nonlinear measures of fundamental frequency variation

PPE - Entropy of the discrete probability distribution of occurrence of relative semitone variations

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