

## Data Set Information:

<b>Data Set Characteristics:</b>	Multivariate	<b>Number of Instances:</b>	7195
<b>Attribute Characteristics:</b>	Real	<b>Number of Attributes:</b>	22
<b>Associated Tasks:</b>	Classification	<b>Missing Values?</b>	N/A

This dataset was used in several classifications tasks related to the challenge of anuran species recognition through their calls. It is a multilabel dataset with three columns of labels. This dataset was created segmenting 60 audio records belonging to 4 different families, 8 genus, and 10 species. Each audio corresponds to one specimen (an individual frog), the record ID is also included as an extra column. We used the spectral entropy and a binary cluster method to detect audio frames belonging to each syllable. The segmentation and feature extraction were carried out in Matlab. After the segmentation we got 7195 syllables, which became instances for train and test the classifier. These records were collected in situ under real noise conditions (the background sound). Some species are from the campus of Federal University of Amazonas, Manaus, others from Mata Atl ntica, Brazil, and one of them from C rdoba, Argentina. The recordings were stored in wav format with 44.1kHz of sampling frequency and 32bit of resolution, which allows us to analyze signals up to 22kHz. From every extracted syllable 22 MFCCs were calculated by using 44 triangular filters. The amount of instances per class are:

- ☞ Bufonidae 68
- ☞ Dendrobatidae 542
- ☞ Hylidae 2165
- ☞ Leptodactylidae 4420

## Attribute Information:

Mel-frequency cepstral coefficients (MFCCs) are coefficients that collectively make up an mel-frequency cepstrum (MFC). Due to each syllable has different length, every row i was normalized

according to : 
$$\frac{MFCCs(i)}{Max|MFCCS(i)|}$$