1wav文件采样率转换

例如从2channel，4.41k hz 重采样到 1 channel，16k hz

[?](https://www.cnblogs.com/eniac1946/p/9051227.html)

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| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42 | def downsampleWav(src, dst, inrate=44100, outrate=16000, inchannels=2, outchannels=1):      import os,wave,audioop      if not os.path.exists(src):          print ('Source not found!')          return False        if not os.path.exists(os.path.dirname(dst)):          os.makedirs(os.path.dirname(dst))        try:          s\_read = wave.open(src, 'r')          s\_write = wave.open(dst, 'w')      except:          print ('Failed to open files!')          return False        n\_frames = s\_read.getnframes()      data = s\_read.readframes(n\_frames)        try:          converted = audioop.ratecv(data, 2, inchannels, inrate, outrate, None)          if outchannels == 1:              converted = audioop.tomono(converted[0], 2, 1, 0)      except:          print ('Failed to downsample wav')          return False        try:          s\_write.setparams((outchannels, 2, outrate, 0, 'NONE', 'Uncompressed'))          s\_write.writeframes(converted)      except:          print ('Failed to write wav')          return False        try:          s\_read.close()          s\_write.close()      except:          print ('Failed to close wav files')          return False        return True |

若in和out都是单通道：

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| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46 | def downsampleWav(src, dst, inrate=48000, outrate=16000, inchannels=1, outchannels=1):      import os,wave,audioop      if not os.path.exists(src):          print ('Source not found!')          return False        if not os.path.exists(os.path.dirname(dst)):          os.makedirs(os.path.dirname(dst))        try:          s\_read = wave.open(src, 'rb')          params = s\_read.getparams()          nchannels, sampwidth, framerate, nframes = params[:4]          print(nchannels,sampwidth, framerate,nframes)          s\_write = wave.open(dst, 'wb')      except:          print ('Failed to open files!')          return False        n\_frames = s\_read.getnframes()      data = s\_read.readframes(n\_frames)        try:          converted = audioop.ratecv(data, 2, inchannels, inrate, outrate, None)          if outchannels == 1 and inchannels != 1:              converted = audioop.tomono(converted[0], 2, 1, 0)      except:          print ('Failed to downsample wav')          return False        try:          s\_write.setparams((outchannels, 2, outrate, 0, 'NONE', 'Uncompressed'))          s\_write.writeframes(converted[0])      except Exception as e:          print(e)          print ('Failed to write wav')          return False        try:          s\_read.close()          s\_write.close()      except:          print ('Failed to close wav files')          return False        return True |

**方案二**

y为下采样的结果，类型np.ndarray

You can use Librosa's load() function,

import librosa

y, s = librosa.load('test.wav', sr=8000) # Downsample 44.1kHz to 8kHz

The extra effort to install Librosa is probably worth the peace of mind.

Pro-tip: when installing Librosa on Anaconda, you need to [install ffmpeg](https://github.com/librosa/librosa#audioread) as well, so

pip install librosa

conda install -c conda-forge ffmpeg