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## Pydub raw audio data



I'm using Pydub in Python 3.4 to try to detect the pitch of some audio files.

I have a working pitch detection algorithm (McLeod Pitch Method), which is robust for real-time applications (I even made an Android pitch detection app with it: <https://github.com/sevagh/Pitcha>).

My issue is that I'm not getting any meaningful output from the algorithm when I apply it to `AudioSegment._data`.

Code:

```

from pydub import AudioSegment

sound = AudioSegment.from_wav(file="./8700hz.wav")

#sampling_rate = sound.frame_rate = 44100hz
mpm = Mpm(sound.frame_rate, len(sound._data))
print(mpm.get_pitch(sound._data))

```

Output:

**Pitch:** 150.000002396

If I play the same wav file from my speakers, record it from my microphone and apply the algorithm on the raw microphone capture (signed 16-bit little endian PCM, 44100Hz, mono), I get the correct pitch.

Does `AudioSegment._data` not return what I'm expecting?

[python](#) [pydub](#) [pitch-detection](#)

asked Sep 3 '15 at 11:10



[Sevagh](#)

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### 1 Answer

`sound._data` is a `bytestring`. I'm not sure what input `Mpm` expects, but you may need to convert the `bytestring` to an array like so:

```

import array
from pydub import AudioSegment
from pydub.utils import get_array_type

sound = AudioSegment.from_wav(file="./8700hz.wav")

bit_depth = sound.sample_width * 8
array_type = get_array_type(bit_depth)

numeric_array = array.array(array_type, sound._data)

```

answered Sep 3 '15 at 18:38



[Jiaaro](#)

37.3k 30 127 159

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Actually Mpm just iterates over whatever I give it, so I was accessing the bytestring with: `for i in range(0, len(sound._data)): sound._data[i].` – [Sevag](#) Sep 3 '15 at 21:44

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Your suggestion worked out perfectly btw: Pitch: 8715.26013083 Pitch: 8714.35873644 Pitch: 8713.95019086 Pitch: 8714.24068269. Thanks for making a great library and answering questions about it so actively on SO. – [Sevag](#) Sep 3 '15 at 21:45

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