

# Audio Data Augmentation Libraries in Python

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# Audio data augmentation libraries in Python

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- librosa
- audiomentations
- torch-audiomentations
- torchaudio.transforms

# Librosa

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- Amazing audio processing library
- Open source
- Time stretch / pitch shift
- Offline augmentation

# audiomentations

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- Open source
- Loads of transformations (raw audio + spectrograms)
- Supports augmentation chains (compositions)
- Online and offline augmentation
- Integrates with Keras / PyTorch
- CPU only

# torch-audiomentations

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- Open source
- Inspired to audiomentations
- Focused on PyTorch
- GPU processing
- Online augmentation
- Decent number of transformations

# Torchaudio

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- Open source
- Time / frequency masking, time stretch, pitch shift
- Supports augmentation chains
- Perfectly integrated with PyTorch
- Online augmentation
- Runs on GPU

# Which library should I use?

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- Minimal data augmentation needs -> librosa



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- Minimal data augmentation needs -> librosa
- Using PyTorch -> torchaudio

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- Minimal data augmentation needs -> librosa
- Using PyTorch -> torchaudio
- Using PyTorch and need more transforms -> torch-audiomentations

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- Minimal data augmentation needs -> librosa
- Using PyTorch -> torchaudio
- Using PyTorch and need more transforms -> torch-audiomentations
- Complex augmentation needs -> audiomentations

**WHEN YOU REALISE YOU HAVE TO BUILD  
A CUSTOM AUDIO DATA AUGMENTATION SOLUTION**



# Join the community!

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