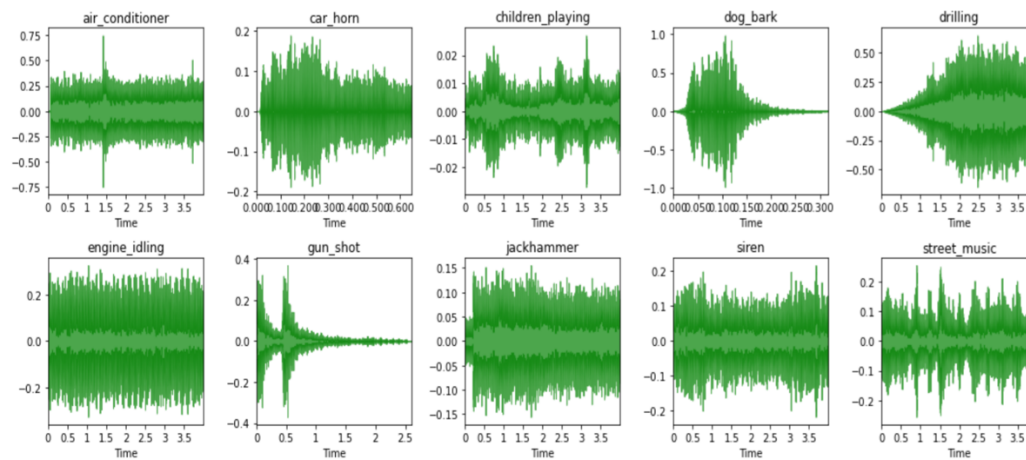


Classifying Urban sounds using Deep Learning

Waveplot:



Visualizing explain the differences between some of the classes the waveforms for repetitive noises such as air conditioner, drilling, engine idle, and jackhammer, in particular, have a similar structure. The peak in the dog barking sample is also similar in shape to the peak in the gunshot sample . The car horn is also similar. There are also similarities between what the children playing and what is heard on the street.

Data Preprocessing:

We identified the following audio properties that need preprocessing to ensure consistency across the whole dataset:

- Audio Channels
- Sample rate
- Bit-depth

Also, we use Mel-Frequency Cepstral Coefficients (MFCC) and extract it from audio samples Now lets move on to split and build our model.

Initial model architecture “baseline”:

We will begin by using a simple neural network architecture, such as Multi-Layer Perceptron before experimenting with more complex architectures such as Convolutional Neural Networks.

