```
AttributeError: module 'tensorflow._api.v2.compat.v1.nn' has no attribute 'min_pool'
```

It looks like we've hit another error in the code execution. The error message indicates that TensorFlow doesn't have a function called min\_pool in its tf.nn module.

Let's look at the issue more closely:

# **Analysis of the Error**

The error AttributeError: module 'tensorflow.\_api.v2.compat.v1.nn' has no attribute 'min\_pool' occurs because:

- 1. In the OnsetNet\_Gina5 class, there's code that attempts to use tf.nn.min\_pool for the pooling operation when pooling\_method is set to 'min'.
- 2. However, TensorFlow only provides tf.nn.max pool and tf.nn.avg pool functions natively, but not tf.nn.min pool.

### **Solution**

We need to modify the <code>OnsetNet\_Gina5</code> class to handle the 'min' pooling method differently, since there's no direct <code>min\_pool</code> function in TensorFlow. Here are a few ways to implement this:

## Option 1: Implement a custom min pool function

The best approach would be to implement min pooling using TensorFlow operations:

```
def min_pool(input, ksize, strides, padding):
    """Custom implementation of min pooling using TensorFlow operations."""
    # Negate the input tensor, apply max pooling, then negate again
    return -tf.nn.max_pool(-input, ksize=ksize, strides=strides, padding=padding)
```

## Option 2: Modify the pooling\_method selection in the OnsetNet\_Gina5 class

Find the sections in OnsetNet\_Gina5 that use tf.nn.min\_pool and replace them with the custom implementation above. Look for something like:

```
if pooling_method == 'max':
    pooled = tf.nn.max_pool(...)
elif pooling_method == 'avg':
    pooled = tf.nn.avg_pool(...)
elif pooling_method == 'min':
    pooled = tf.nn.min_pool(...) # This is the line causing the error
```

### And change it to:

```
if pooling_method == 'max':
    pooled = tf.nn.max_pool(...)
elif pooling_method == 'avg':
    pooled = tf.nn.avg_pool(...)
elif pooling_method == 'min':
    # Custom min pooling implementation
    pooled = -tf.nn.max_pool(-input_tensor, ksize=pool_shape, strides=pool_shape, padding='SAME')
```