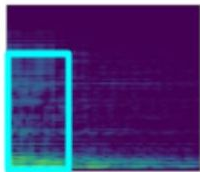


Minutes of the last meet

- **Modulation Spectrogram Approach :**
CV approach
- SSIM AVERAGED IMAGE ANALYSIS over different partitions
- This week : Inspiration from ideas of discussion with Professor.
- Multichannel input considering images with different window sizes.

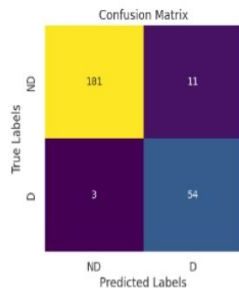
BEST SO FAR USING SSIM



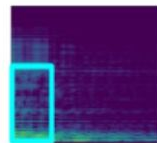
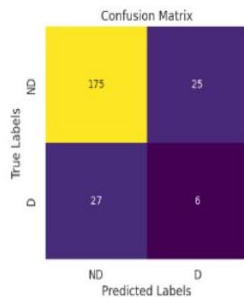
TRAIN ACCURACY :
94.37751004016064

TEST ACCURACY :
77.6824034334764

TRAIN



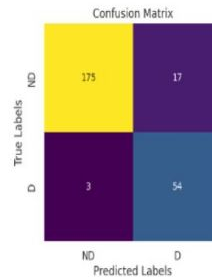
TEST



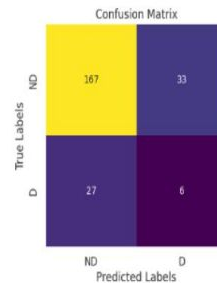
TRAIN ACCURACY :
91.96787148594377

TEST ACCURACY :
74.2489270386266

TRAIN




TEST



Window sizes used in Extracting Spectrogram Images from Audio

- 0.04 (was default)
- 0.004
- 0.01

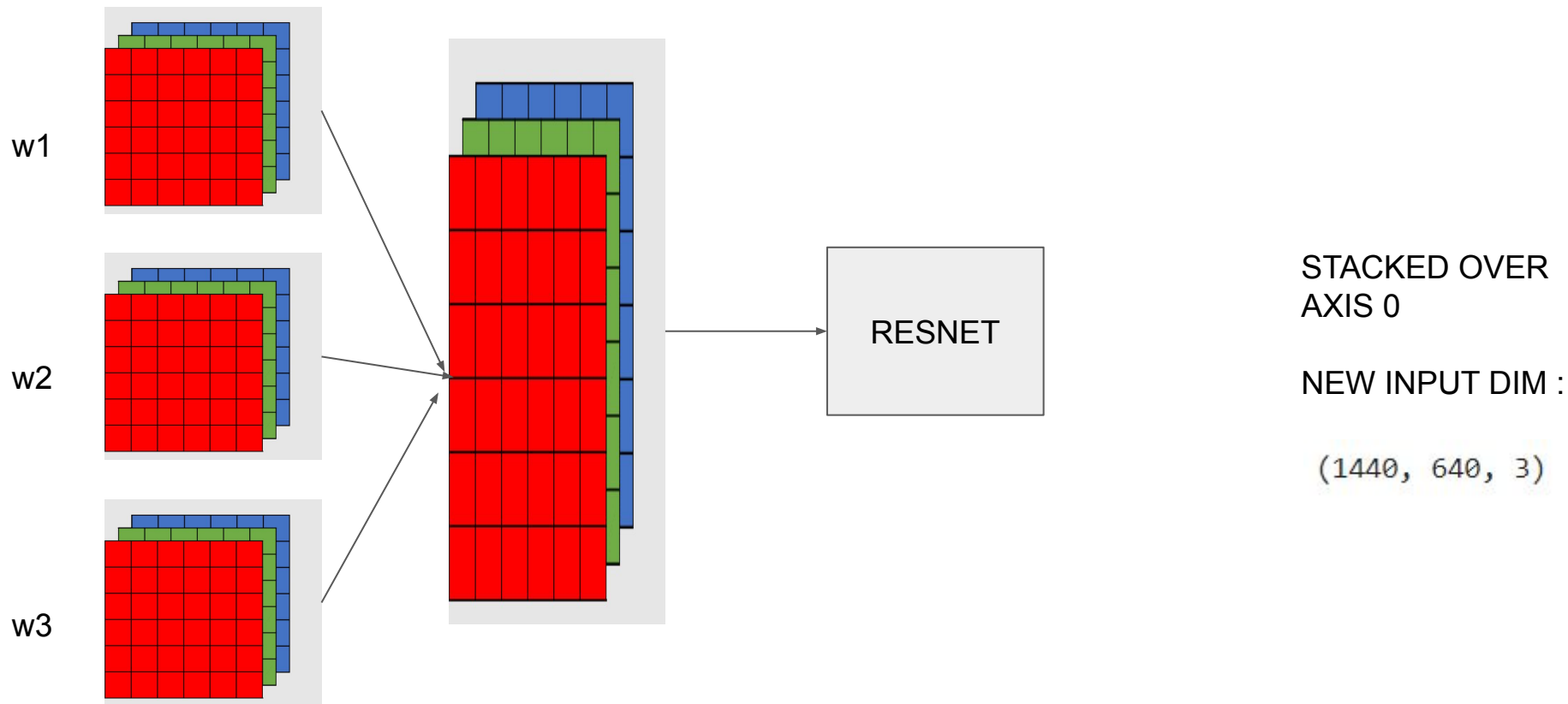


```
# FUNCTIONS FOR MODULATION SPECTROGRAM
def modSpec(x, fs, win_size_sec=0.04):
    # win_size_sec = 0.04 # window length for the STFFT (seconds)
    win_shft_sec = 0.01 # shift between consecutive windows (seconds)

    stft_modulation_spectrogram = ama.strfft_modulation_spectrogram(
        x,
        fs,
        win_size=round(win_size_sec * fs),
        win_shift=round(win_shft_sec * fs))

    return stft_modulation_spectrogram
```

Multichannel approach using 3 Images with Different Window sizes

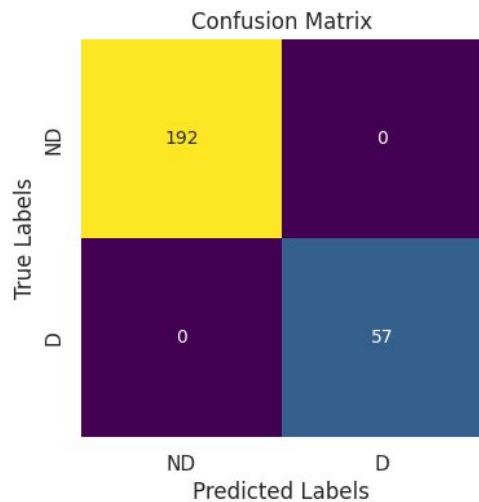


RESNET 50

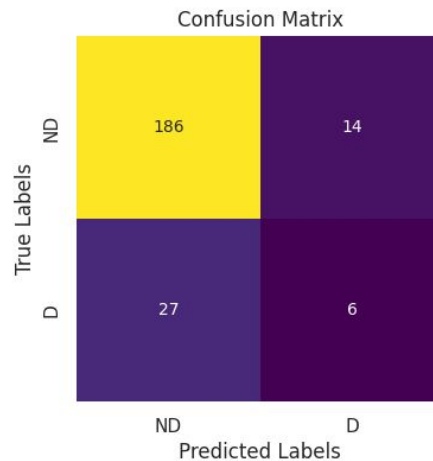
**TRAIN ACCURACY :
100**

**TEST ACCURACY :
82.4**

TRAIN



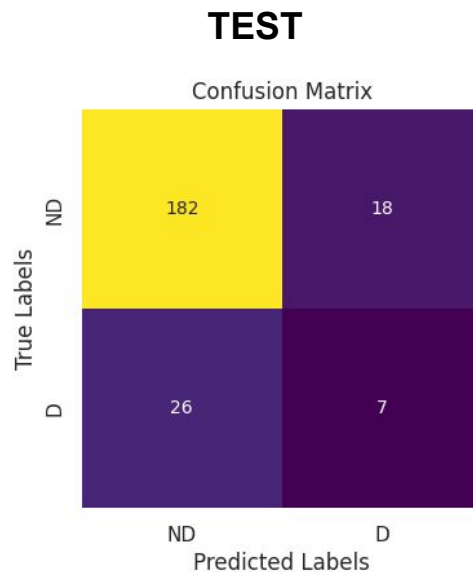
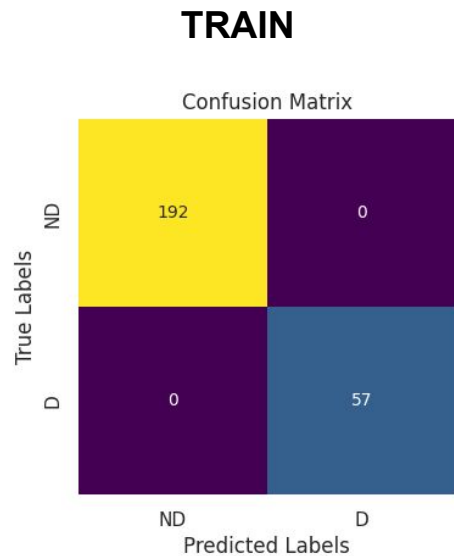
TEST



RESNET 18

**TRAIN ACCURACY :
100**

**TEST ACCURACY :
81.1159**



RESNET 152

**TRAIN ACCURACY :
99.59**

**TEST ACCURACY :
66.52**

