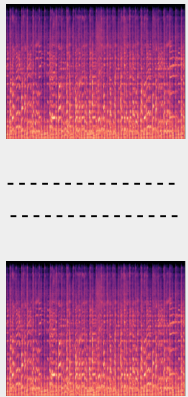


**Mel spectrograms**



**Feature extraction using pre-trained CNN**

**Pre-trained CNN**



**Hybrid meta heuristic  
feature selection**

**Cuckoo search algorithm**

**Whale optimization  
algorithm**

**Optimal feature  
set selection**

