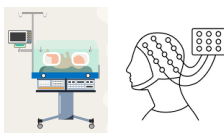


## Data Layer

1)



NICU data collection

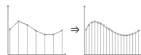
2)



Raw data

### Data Preprocessing

3)



Down sampling  
(256Hz to 32Hz)



High-pass filter(0.5 Hz)



Scaling data



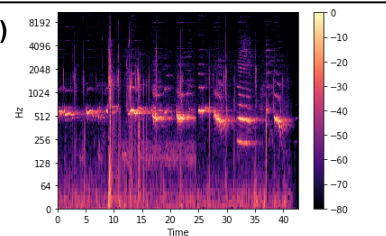
Segmenting data into  
window sizes



Feature extraction using  
mel spectrogram

## Intelligence Layer

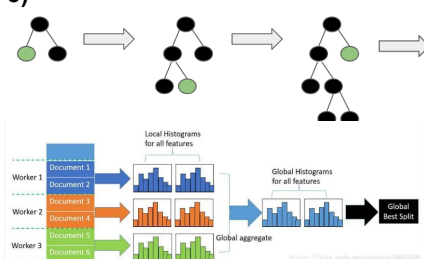
4)



Mel spectrogram

Passing into the  
proposed model

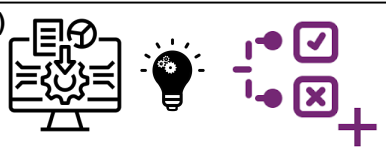
5)



LightGBM

Giving output

6)



## Application Layer

7)



NICU in hospital

8)



Report generation

9)



Alert in case of seizure

10)



Data storage for future