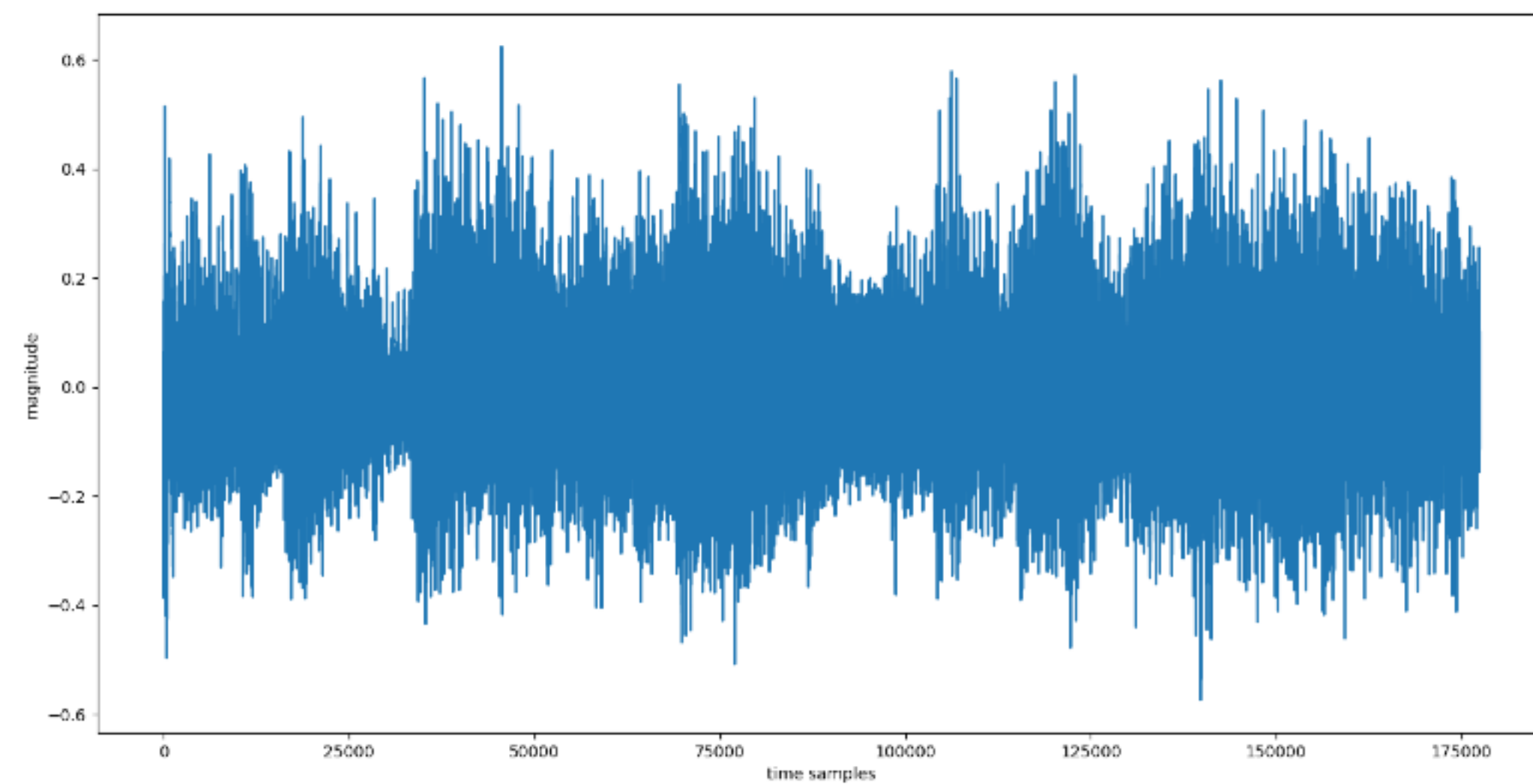


# Motivations

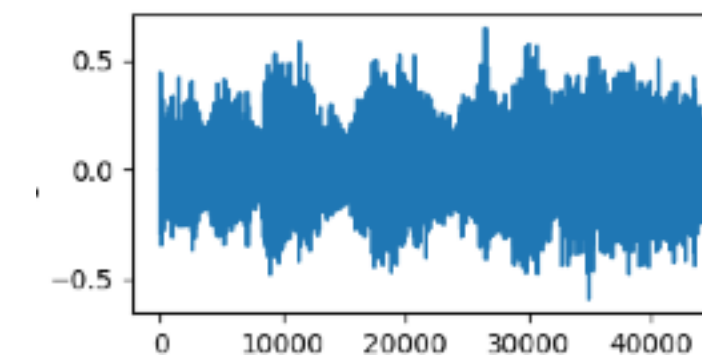
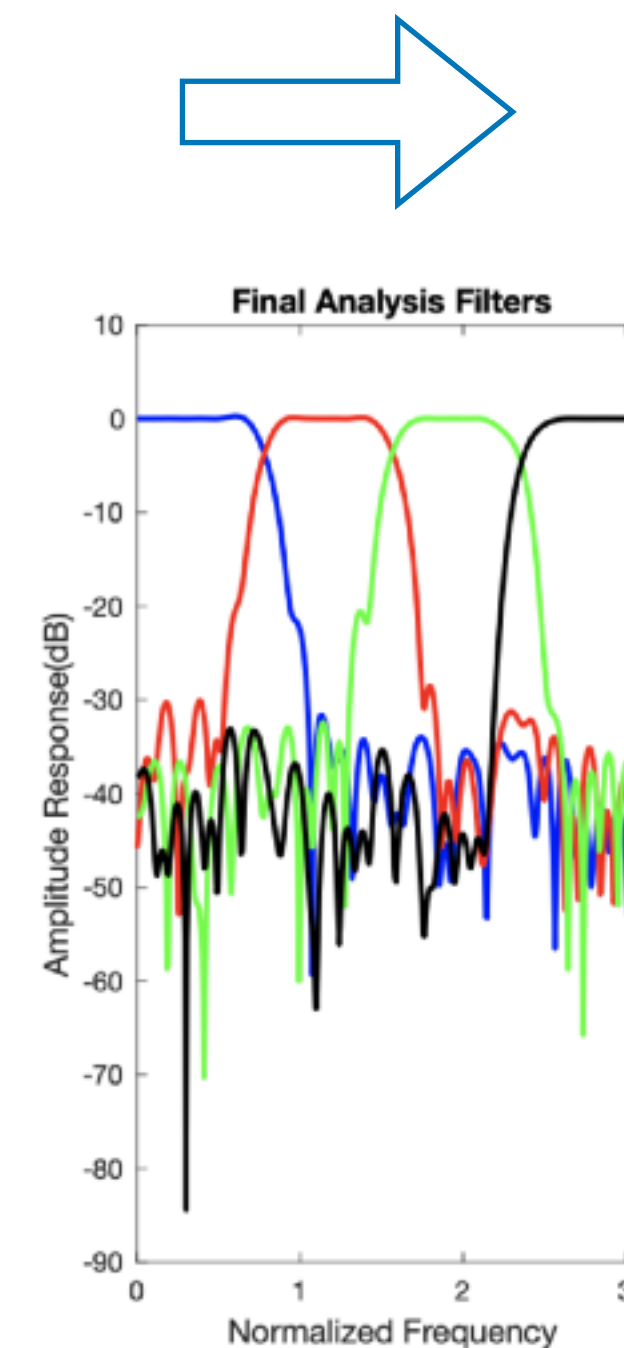
## Channel-wise subband feature

- What's subband decomposition?

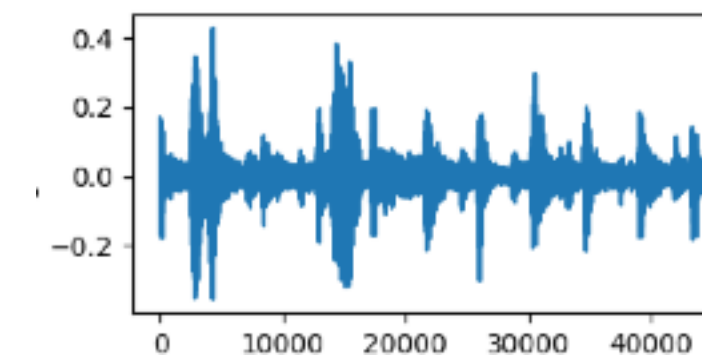


Sample rate: 44100

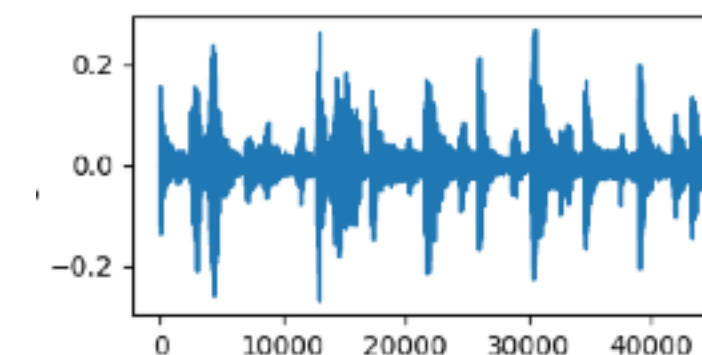
Convolution with four filters  
&  
Down sampling  $\times 4$



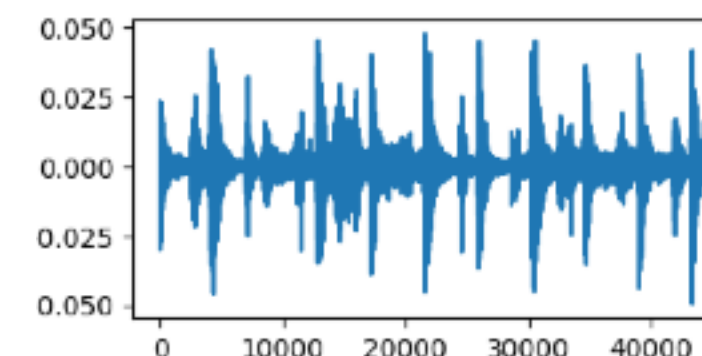
Subband 1



Subband 2



Subband 3



Subband 4

Sample rate: 11025

# Motivations

## Channel-wise subband feature

- Why subband decomposition?
  - Original data is high dimensional.
  - Unbalanced information in each subbands.
  - More flexibility for modeling.
    - e.g., Channel-wise subband

