

The data process flow pursued was as follows:

1. Starting from raw data (.csv file supplementary material)
  - a. Normalize all datapoints per participant between 0 and 1.
  - b. Apply peak shaving to remove spikes
  - c. Apply Fourier transform and compensate for clean air signal
  - d. Apply Fourier back transform
  - e. Apply e-power to all data points
2. Select NO<sub>x</sub>-sensor only
3. Apply feature extraction to end up with a 19-element vector per participant
4. Normalize the vectors between -1 and +1
5. Apply a resilient backpropagating artificial neural network for training using the following parameters:
  - a. Max Epoch : 5000
  - b. Max Retries : 25
  - c. Max Same Error : 30
  - d. Max Error Inc : 15
  - e. Minimal Error : 0.0005
  - f. Learn Rate : 0.0010
  - g. Alpha : 0.0500
  - h. Topology : 17x7
6. ROC-curve is obtained when applying 'Leave-10%-out' cross validation on the datapoints.