**Data Processing**

Following is a description of data processing techniques used in this case.

**Hanning Window:** First the data were chopped up into overlapping 1-second ‘frames’ and a Hanning window was applied.

**Fast Fourier Transform (FFT):** FFT was applied to transform data for each frame from time domain to frequency domain.

## Network Architecture

A convolutional neural network was iteratively constructed and tuned to give the best classification accuracy with the data available. The final architecture is shown below.

#### Table 1: Summary of Convolutional Neural Network in Keras

