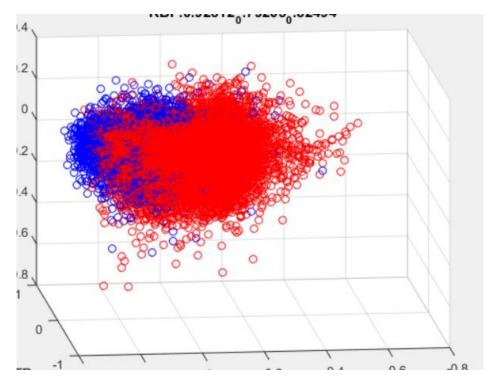
```
N=1024:
numberOfchannels=23;
for channel=1:numberOfchannels % loop on each channel
if(iscell(all_data))
    data=cell2mat(all data(:,channel));
  else
    data=all data;
  end
 data=data(1:floor(length(data)/N)*N,1); %data flooring
 %%%%reshaping data to 1024 rows and ..... columns%%%
 new data = reshape(data, N, floor(length(data)/N));
%%%%%%loop on columns of the reshaped output from 1to its length%%%%%%
 for i=1:length(data)/N
%%%output matrix for each channel and chosen parameters according to
%%%the pre written quantizer module
 ShannonEnt(channel,i) = ShannonEntropy(new data(i,:), max(new data(i,:)),4);
   end
end
```

```
function H = ShannonEntropy(X, sig Max, levels)
   % Number of levels for quantization and the signal maximum value
   % using the quantizer module that I wrote
   [quantized] = quantizer(X,'NLevels', levels,'SigMax', sig_Max);
   unique values = unique(quantized);
   Frequency = zeros(size(unique values));
   % Calculate sample frequencies
   for level = 1:length(unique_values)
      Frequency(level) = sum(quantized == unique_values(level));
   end
   % Calculate sample class probabilities
   P = Frequency / sum(Frequency);
   % Calculate Shannon Entropy
   H = -sum(P \cdot * log(P));
```

## 



To be modified, as the results on model is not that sufficient, also will try to have more results on more than one patient to see how the feature works!