Paper Title

1. **Preprocessing: Filtering & Segmentation**

* *wavelet threshold method and wavelet decomposition* reconstruction algorithm are applied together to reduce noises
* the segmentation of ECG signals and the reduction of dimension are *performed by using R peaks*

**2&3-Feature Extraction& Classification**

1D-CNN method

**4-Accuracy**

- the accuracy is 97.5%

**5-Two Leads or One Lead ? In case of two leads .. how classification of two leads is merged to have final decision ?**

**6-Classes**

- *5 classes* ,:

1- normal beats (N) 🡪 ” Left bundle branch block (L), Right bundle branch block (R) , Atrial escape beat (e), Nodal (junctional) escape beat (j)”

2- supraventricular ectopic beats (S) 🡪 “ Atrial premature contraction (A), Aberrated atrial premature beat (a), Nodal (junctional)premature beat (J), Supraventricular premature beat (S) ”

3- ventricular ectopic beats (V) 🡪 ” Ventricular premature contraction (V), Ventricular escape beat (E)”

4- fusion beats (F) 🡪 Fusion of ventricular and normal beat (F)

5- unclassifiable beats (Q)🡪Paced beat (/), Fusion of paced and normal beat (f), Unclassified beat (Q)