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**Real Time Electrocardiogram Identification with Multi-modal Machine Learning Algorithms**

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**Abstract**

Weaknesses in conventional identification technologies such as identification cards, badges and RFID tags prompts attention to biometric form of identification. Biometrics like voice, brain signal and finger print are unique human traits that can be used for identification. In this paper we present an identification system based on Electrocardiogram (heart signal). There is a considerable number of research in the past with high accuracy for identification, however, most ignore the practical time required to identify an individual. In this study, we explored a more practical approach in identification by reducing the number of time required for identification. We explore ways to identify a person within 3-4 s using just 5 heart beats. We extracted few reliable features from each QRS complexes, combined effort of three algorithms to achieve 96% accuracy. This approach is more suitable and practical in real time applications where time for identification is important.

**Keywords**

Author Keywords: [SVM](#); [Random forest](#); [Logistic regression](#); [QRS complex](#); [ECG biometric](#); [Identification](#)

KeyWords Plus: [BIOMETRICS](#); [INTERNET](#); [THINGS](#)

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