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### **SURVEY ARTICLE**

# **Thyroid Classification as Normal and Abnormal using SCG based Feed Forward Back Propagation Neural Network Algorithm**

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**Abstract-**Thyroid is a small butterfly shaped gland located in the front of the neck just below the Adams apple. Thyroid is one of the endocrine gland, which control metabolism by producing hormones. The abnormalities of the thyroid gland is detected and classified by using ultrasound imaging. In our proposed technique, initially the input images are preprocessed using adaptive median filter in order to suppress the presence of noise. After that the normal and abnormal thyroid images are classified using SCG based Feed Forward Back propagation Neural Network (FFBNN) which utilizes the statistical features extracted from the preprocessed image to reduce invasive operations such as biopsy and Fine Needle Aspiration (FNA). Normal and abnormal thyroid ultrasound image classification is compared with LMA based FFBNN algorithm.

**Key terms:-** Medical imaging; Thyroid; SCG based Feed Forward Back propagation Neural Network (FFBNN); Adaptive Median Filter (AMF); Classification.

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