

Cardiovascular Disease Detection using SVM

Greeshma. S¹ and Binu Chacko²

M Tech Student, Department of Electronics and Communication¹

Assistant Professor, Department of Electronics and Communication²

Lourdes Matha College of Science and Technology, Thiruvananthapuram, Kerala, India

Abstract: Cardiovascular Diseases are commonly identified using a stethoscope. Currently there are so many device like digital stethoscope and mobile device can be used for this purpose. Without medical knowledge it will be difficult to identify the Heart irregularities. The paper introduce a new method to classifying heartbeat. It is on the basis of classifying audio heart recordings to five most commonly occurring classes that are artifact, extra heart sound, extrasystole, murmur and normal heart beat. this method is also check the precision accuracy of SVM method. This paper is also outlines practicality and next step to improve classification of heart sound.

Keywords: Heartbeat Sounds, Heartbeat Feature Extraction, Classification of Heartbeats

REFERENCES

- [1]. Son, G.-Y.; Kwon, S. Classification of Heart Sound Signal Using Multiple Features. Appl. Sci. 2018, 8, 2344
- [2]. Nassralla, M., El Zein, Z., Hajj, H. (2017, October). Classification of normal and abnormal heart sounds. In 2017 Fourth International Conference on Advances in Biomedical Engineering(ICABME)(pp.1-4). IEEE.
- [3]. Bashar, M. K., Dandapat, S., Kumazawa, I. (2018, December).Heart Abnormality Classification Using Phonocardiogram (PCGSignals). In 2018 IEEE-EMBS Conference on Biomedical Engineering and Sciences (IECBES) (pp. 336-340). IEEE.
- [4]. Upretee, P., Yuksel, M. E. (2019, April). Accurate Classification of Heart Sounds for Disease Diagnosis by A Single Time-Varying Spectral Feature: Preliminary Results. In 2019 Scientific Meeting on Electrical-Electronics Biomedical Engineering and Computer Science (EBBT) (pp. 1-4). IEEE.
- [5]. P.Bentley, G. Nordehn, M. Coimbra, and S. Mannor. The PASCAL Classifying Heart Sounds Challenge, available at <http://www.peterjbentley.com/heartchallenge/index.html> .
- [6]. Listen to Your Heart: Feature Extraction and Classification Methods for Heart Sounds Angela Chao*, Shirley Ng† and Linda Wang‡ Department of Systems Design Engineering University of Waterloo Waterloo, Canada