**Title of the Project:** SOUND CLASSIFICATION FOR RESPIRATORY DISEASES USING MACHINE LEARNING TECHNIQUE

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**ABSTRACT**

Respiratory sounds are one of the important signs of lung health and respiratory disorders. These respiratory sounds can acquire using digital stethoscopes and other recording devices. This advanced information opens up the chance of utilizing artificial intelligence (AI) to naturally analyse respiratory scatters like asthma, pneumonia and bronchiolitis, to give some examples. A very high number of people lose their lives to different respiratory diseases every day. Respiratory Sound Analysis has been a key tool to accurately detect these types of diseases. Earlier manual detection of respiratory sounds was used but it is not feasible to detect various lung diseases due to various reasons like audio quality and perceptions of different doctors. Modern computer aided analysis helps to give much better results in identifying the diseases from the sound i.e. identification of wheezes and crackles and thus better treatment can be given to patients. These respiratory sound diseases include Asthma, Bronchitis, Pneumonia, COPD and URTI. The prediction with decision trees gives an accuracy rate of 90 percent. This research will be very helpful for the healthcare professionals such as doctors for the easy and accurate diagnosis of respiratory diseases. This study will be a major contribution in the area of the respiratory disease classification by using lungs sounds. In this project a web application is created with ease of access for the user. The user will login to this application and gives patient’s data as input. The machine learning model will predict the disease patient suffering from. If the patient does not have disease it will display as healthy.