Chapter 8
Sentilyser:
Embedding Voice Markers in Homeopathy Treatments

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ABSTRACT

Cognitive and somatic health is predominantly congruous. Happiness creates a propitious impact on a person's wellbeing. Likewise, stress can be detrimental to a person's overall health. Nevertheless, it is perplexing to truly understand an emotional state of a patient for an unerring diagnosis. Considering the old adage, necessity is the mother of invention, there is a need for a sentimental and emotional analysis tool for the accurate identification of the mental state of the patient. Thus, Sentilyser was created. It is a clinical decision support system. Using the recorded voice of a person, the mood is analyzed using support vector regression. Arousal and valence of the audio file is calculated, and thus, the corresponding mood is predicted. The objective of this chapter is to propose the use of Sentilyser as a part of a patient's diagnosis, which will not only help the physician reach a better conclusion but will also help them in cases where the patients themselves are unaware about their own psychological state.

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INTRODUCTION

Homeopathy has the power to treat patients well and is basically it's a preventive approach of healthcare world. Homeopathy works both on physical and psychological levels of an individual. In addition to physical ailments, psychological set up also plays an important role. To utilize this power of homeopathy in this busy world with ever growing patients, technology support for the doctor is must. One of the aspects of providing technical support to homeopathy doctor is considered in this research and that is mood of the patient. It is necessary to collaborate technology with homeopathy treatment, so as to provide helping hand to the doctor, maintain the history of patient in soft form and on cloud for ease of access, and also to learn from the history for effectual treatment of the patient. Such collaboration is also able to find the hidden ailments if any, during the patients visit to the doctor, based on the frequency of the voice using mobile apps. It is necessary to extend this research further to tackle the various other aspects of humans or any other leaving entity for their wellbeing as homeopathy is useful not only for humans.

Vocal biomarkers: the future of diagnostic medicine, a diagnostic tool for your physician to indicate signs of illnesses ranging from stress and depression to cardiovascular diseases (Rath et al, 2019). Technology enabled healthcare (Rath and Pattanyak, 2018; Rath et al, 2018). service is the prospect. Hence in this research proposed a very handy, user-friendly, effectual support system for homeopaths. The sky is the limit for use of biomarkers, voice markers and the available variety these days, in almost all aspects of healthcare. The various applications of Machine Learning with collaboration with biomarkers is possible in allopath as well, to not only diagnose but predict and prevent, with emphasis on historical data of patients, valuable notes by doctor taken time to time and prescriptions suggested etc.

Technology Collaborated homeopath's practice will not only give an edge to the patient but also to the healthcare professionals. Patients details can be easily summarized using such a technology collaborated research, it can be used as the patient consults with doctor or vice versa, in case of emergency also. Machine learning with focus on incremental learning approaches is exercised in this research to achieve the said collaborated homeopath practice.

Discovery of knowledge from patient's data is challenging task. Sentilyser is intended to use techniques that discover hidden patterns and establish linkage between the voice and mood of the patient. If a doctor often records sessions with patients for analyzing their development through different therapy sessions, it generates an incessant flow of data which can be used further for betterment in patient's treatment. It in turn be a tool to harness the innate characteristics of the generated data but can be convenient and beneficial. Sentilyser is an intelligent decision-making tool in the clinical workflow. This tool will not only analyze mood of the patient but also