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(57) Abstract :
ABSTRACT PERSONALIZED NON-INVASIVE VAGUS NERVE STIMULATION DEVICE FOR TREATMENT OF SPEECH AND LANGUAGE DISORDERS The present disclosure discloses a personalized non-invasive vagus nerve stimulation device (102) for treatment of speech and language disorders, comprising sensors (108), wherein the sensors are placed within the nasal cavity for detecting physiological signals, a control unit (104) for processing and analysing the detected signals and generating electric impulses, electrodes (110) positioned in close proximity to the vagus nerve for delivering the electric impulses to stimulate nerve fibers, a pulse generator module (112) connected to the electrodes for generating the electric signal, a microphone (114) for conducting speech evaluation and diagnostic testing to assess the nature and severity of the speech and language disorder, a processor (106) for analysing physiological and clinical data, to generate a personalized stimulation program and a mobile app (116) connected to the control unit for controlling the device, adjusting stimulation parameters, monitoring therapy progress, and collecting and storing data from each session. FIG. 1

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