Down Syndrome Smart Watch

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People with Down syndrome face problems in speaking and words pronouncing. This problem makes them depressed and not interact with family, friends, and community. In addition, they have neurological disorders and imbalances in vital processes. The proposed system using Artificial intelligent (AI) to analyze and correct the spoken words from children with Down syndrome and get output audio with the correct pronunciation. AI found that the expression language of Down syndrome children could be improved, leading to an increase in their interaction with the surrounding environment, relieving neurological disorders, and an increase in the child's sense of inner peace and their integration with their peers in the classroom. A data set of words have been collected from one of the syndrome cases. These words are trained on Arduino Mega controller. When Down syndrome speaks, the system records the (incorrect) spoken words and then it is compared with the trained data set then the speakers will pronounce the correct word. This study showed that employing AI to correct speech in Down syndrome increases its effectiveness in the surrounding environment. In addition, the proposed system tracks the motion of the child and sends an SMS to tell the parents the location of the child. Moreover, the system would be considered a health monitoring system to the child and send alerts in case of any healthy cases.

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