

Title: Enhancing Patient Monitoring In Wireless Body Area Network Through Sma-Integrated Convolutional Neural Network

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Abstract: Sophisticated systems of surveillance that keep tabs on life's essential functions are called health maintenance technologies. The goal of the endeavor was to plan and construct wirelessly bodily networks of sensors for real-time performance assessment. WBANs need to analyze massive volumes of data for the purpose of making practical judgments during emergencies. In order to overcome these problems, this study presents a deep learning structure for evaluating health consequences called the Slime Mould Algorithm (SMA). In the beginning, information from medical records for patients is gathered by the WBAN networks in order to produce specific measurements for the assessment. WBAN modules communicate with the destination node by sending information based on the collected indicators. In this scenario, the optimal cluster head is determined using the Fruit Fly technique. The combined Fruit fly Procedure's results are then sent to the destination component, whereupon the Convolutional Neural Network, also known as the classifies the medical data in order to assess risk. In this instance, the CNN is trained using the recommended SMA. With scores of 94.604% and 0.145, along with 0.058 for accuracy, power, and productivity, correspondingly, the suggested SMA outperforms the other methods.

Key words: Patient Monitoring System, Convolutional Neural Network, Slime-Mould Approach, Wireless Body Area Network, Fruit-Fly

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