

CLINICAL DECISION SUPPORT SYSTEM FOR OPTIMIZING SEPSIS CARE

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Sepsis is a life-threatening disease and a sustained Worldwide health issue that requires a quick and accurate diagnosis to improve patient outcomes. This project uses AI-involved clinical decision making systems (CDSS) that use advanced deep learning techniques, particularly multilayer perceptron (MLPs), to predict the onset of sepsis using clinical data such as key features, experimental results, and demographic characteristics. The system is trained on data records published in the Healthcare System and is designed to be well generalized in real-world hospital scenarios to ensure both clinical relevance and reliability. By predicting the analysis, the platform allows early detection, risk stratification, and severity classification, thereby enabling knowledge that can be implemented by the parents of healthcare professionals. The system is delivered via a user-friendly web interface to promote data-controlled, real-time decision discovery, improve clinical efficiency and contribute to reducing sepsis-related mortality. This MLP-based CDSS aims to optimize diagnostic accuracy, optimize treatment workflows and improve all patient management in the intensive care unit.