



Prediction and Determination the Correct Dose of Insulin in Diabetic Patient by Combined Intelligent System

Mohammad Fiuzy ^a, Javad Haddadnia ^b, Kazem Hassanpour ^c, Nasrin Mollania ^b

^a University of Sabzevar Tarbiat Moallem, Iran; ^b University, Iran; ^c School of Medicine, Sabzevar University of Medical Sciences, Iran

Early diagnosis of Diabetes reduced significantly injuries and damages in patients. In addition to prevention diabetes is the important diseases which need special care. People with this disease need special care to control and correct Prediction in the Blood Sugar Fluctuations. The serious complications of this disease will be anesthesia, coma and even, death. Today in these Patients, determine the correct dose of Insulin done based on experience or knowledge of doctors and patients, however, human errors are inevitable. In this study, 124 patients and 188 Healthiest with 12 features were studied and assessed. We tried to use the Artificial Intelligence Processing for Detection and Prediction the correct dose of insulin. The Proposed System have some sub Systems such Evolutionary Algorithms (BPSO1) to select the best answer (features), Reduction and Data Management Algorithms (SVM2) to Correct Categorize between effective features from ineffective features and Adaptive Neuro Fuzzy Inference System (ANFIS3) for Estimation, Learning and Adaptability in order to Recognize and Predict the correct dose of Insulin have been used. The Proposed System by use these Procedures based on features of Database in a Combination and Interaction on systems and methods was successful to achieve high accuracy with minimal error. Compared with Conventional methods and synthetic methods, the performance is much faster and approximately better. Superior Accuracy in proposed system can be realized.