

An Expert System for Insulin Dosage Prediction

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Abstract: *Diabetes Mellitus is a pervasive metabolic disorder demanding precise blood glucose regulation to mitigate complications. Despite lifestyle adjustments, insulin dosage optimization remains pivotal for effective management. Our expert system employs Gradient Boosting Classifier for diabetes prediction and Logistic Regression for insulin dosage estimation, integrating patient data to automate decision-making. This approach facilitates proactive and personalized care, enhancing outcomes and representing a notable advancement in diabetes management.*

By leveraging machine learning techniques, this system accurately identifies diabetic patients and tailors insulin dosage recommendations based on individual characteristics and treatment history. Through automation, it streamlines decision-making processes, alleviating healthcare provider burden and empowering patients to actively participate in their care. Ultimately, our system promises to improve treatment efficacy and patient quality of life, heralding a new era in diabetes management..

Keywords: Machine Learning, Insulin Dosage, Gradient Boosting, Linear Regression

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