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(57) Abstract :

The invention discloses an AI-enabled system for detecting diabetes risk factors comprising a data acquisition unit (101), predictive modeling unit (102), real-time monitoring unit (103), recommendation engine (104), and explainable AI layer (105). The system integrates multimodal data including clinical, genetic, and lifestyle parameters, processes them through advanced AI algorithms, and generates interpretable diabetes risk predictions. It enables continuous monitoring, early detection, and personalized preventive recommendations, thereby reducing healthcare burden. The invention improves diagnostic accuracy, scalability, and patient adherence, offering a transformative solution for diabetes prevention and management.

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