IDEATION PHASE BRAINSTORING

Date	04 october 2023
Team ID	_344
Project Name	AI Based Diabetes Prediction System

DEFINING AI- DIABETIC PREDICTION

AI-based diabetic prediction refers to the use of artificial intelligence (AI) techniques, such as machine learning and data analysis, to forecast the likelihood of an individual developing diabetes or to predict the progression of diabetes in those already diagnosed. It involves analyzing various patient-specific data, such as medical history, genetic information, lifestyle factors, and physiological measurements, to make informed predictions about an individual's risk of diabetes or to help manage and personalize their treatment plan. AI-based diabetic prediction models aim to assist healthcare professionals in early diagnosis, risk assessment, and personalized care for individuals at risk of diabetes.

IDEAS AND APPROCHESH

Muthukumar

->Early Warning Systems

->Population Health

Gowtham

-> Continuous Learning

-> Interoperability

Jayaprakash

->Clinical Data Analysis

->Machine Learning Algorithms

Johnson

->ACCESS TO 24 HOU

->USE DATASETS

Ansari

->PREDICT DIABETIC

->USE NLP

Ideation Phase Problem Statement

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Problems Statement

Patient Profiles:

1. Patient A A 35-year-old newly diagnosed diabetic with no prior experience in managing the condition. This patient seeks personalized guidance for lifestyle changes and insulin dosage adjustments to achieve stable blood sugar levels.

2. Patient B: A 50-year-old diabetic with a history of inconsistent glucose control, resulting in frequent emergency room visits. This patient requires an AI solution that can predict acute blood sugar fluctuations and provide real-time alerts to prevent crises.

3. Patient C: A 60-year-old diabetic who has recently undergone surgery. This patient needs an AI system to predict post-surgery blood sugar patterns and recommend suitable dietary and medication adjustments during the recovery phase.

4. Patient D: A 25-year-old diabetic athlete who experiences unique blood sugar

patterns during intense training and competitions. This patient needs an AI tool that can predict blood sugar responses to various physical activities and suggest optimized insulin regimens.

Challenges:

1. Personalization : Creating an AI model that can adapt to the individual needs and lifestyles of each patient while factoring in their specific diabetes type (Type 1, Type 2, etc.).

2. Data Integration : Gathering and integrating a diverse set of data sources, including medical records, lifestyle data, and real-time glucose monitoring, to provide accurate predictions.

3. Real-time Predictions : Developing algorithms capable of real-time prediction to assist Patient B during emergencies and provide timely guidance.

4. Post-Surgery Variability : Accounting for the unique blood sugar fluctuations associated with Patient C's post-surgery recovery, which may differ significantly from their pre-surgery patterns.

· Ideation Phase Empathize and Discover

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