Ai-Based Diabetes prediction system

Introduction

- Diabetes is a common chronic disease that can be dangerous.
- Diabetes can be identified when blood glucose is higher than normal level, which is caused by high secretion of insulin or biological effects.
- Diabetes can cause various damage to our body and can disfunction tissues, kidneys, eyes and blood vessels.
- Diabetes can be divided into two categories, type 1 diabetes and type 2 diabetes.
- Patients with type 1 diabetes are normally younger with an age less then 30 years old. The clinical symptoms are increase thirst and frequent urination this type of diabetes cannot be cleared by medications as it requires therapy.
- Type 2 diabetes occurs more commonly on middle-aged and old people, which can show hypertension, obesity and other diseases. with our living standards diabetes has increased commonly in people's daily life.
- So how to analyze diabetes is worth studying.

PROPOSED SYSTEM

- The proposed system study is classification of Indian PIMA dataset for diabetes as binary classification problem.
- This is proposed to achieve through machine learning and deep learning classification algorithm.
- For machine learning, SVM algorithm is proposed
- For deep learning Neural network is used.
- The proposed system improves accuracy of prediction through deep learning techniques.

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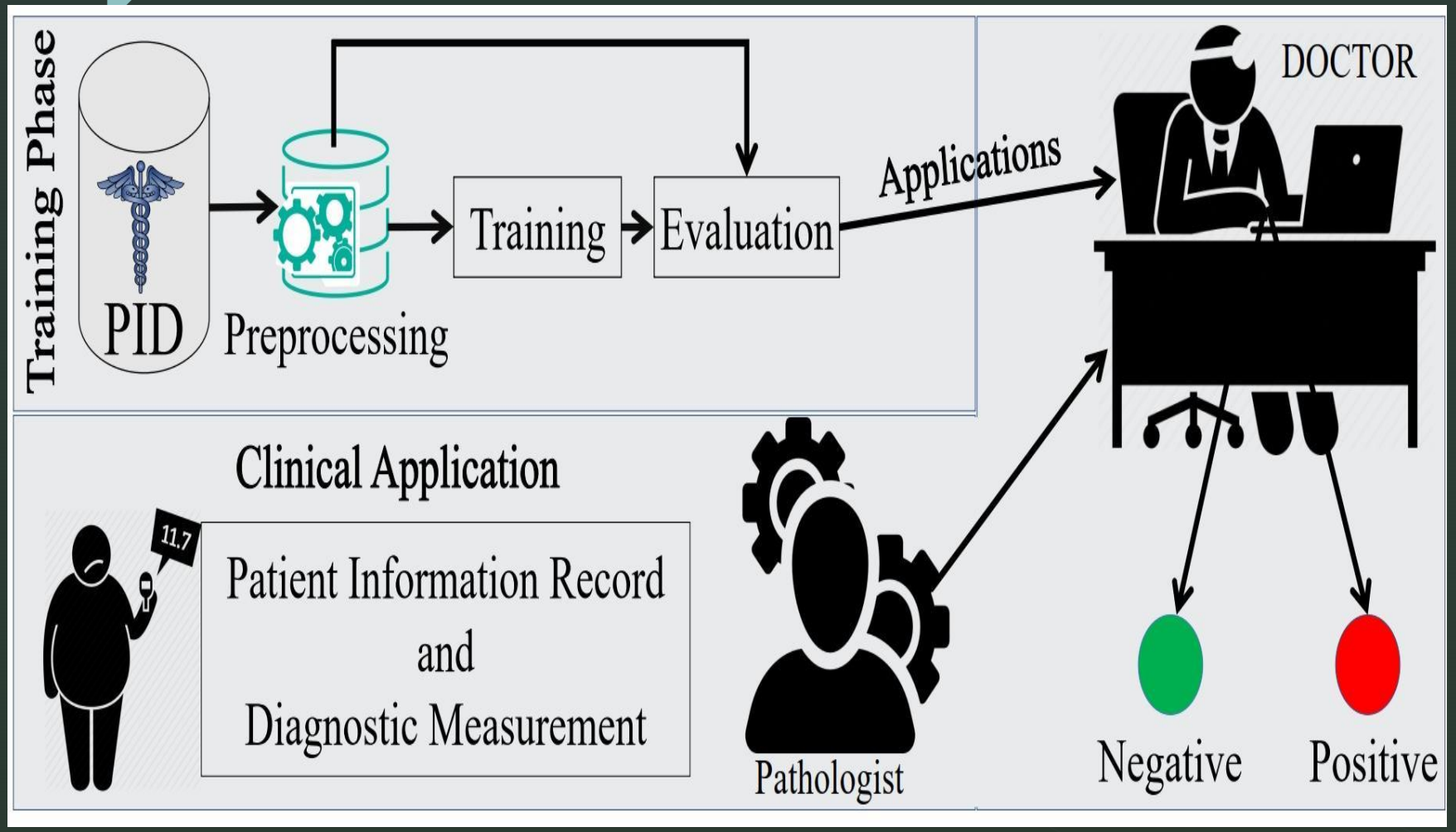
- **Diagnosis Of Diabetes Using Classification Mining Techniques**
- **Iyer, Aiswarya & Jeyalatha, S & Sumbaly, Ronak. (2015). Diagnosis of Diabetes Using Classification Mining Techniques. International Journal of Data Mining & Knowledge Management Process. 5. 1-14. 10.5121/ijdkp.2015.5101.**
- Diabetes has affected over 246 million people worldwide with a majority of them being women. According to the WHO report, by 2025 this number is expected to rise to over 380 million. The disease has been named the fifth deadliest disease in the United States with no imminent cure in sight. With the rise of information technology and its continued advent into the medical and healthcare sector, the cases of diabetes as well as their symptoms are well documented. This paper aims at finding solutions to diagnose the disease by analyzing the patterns found in the data through classification analysis by employing Decision Tree and Naïve Bayes algorithms. The research hopes to propose a quicker and more efficient technique of diagnosing the disease, leading to timely treatment of the patients

OBJECTIVES OF STUDY

- The objective of the study is classify Indian PIMA dataset for diabetes.
- This is proposed to achieve through machine learning and deep learning classification algorithm.
- Classification is considered as our data mining problem, in which SVM algorithm is proposed to use as machine learning part.
- Neural network is used for deep learning part.
- Our objective is to design an interactive application, in which user can give a single input to arrive the prediction.


Training Phase
PID
Preprocessing
Training
Evaluation
Applications
DOCTOR
Clinical Application
11.7
Patient Information Record
and
Diagnostic Measurement
Pathologist
Negative
Positive