PIMA INDIAN DIABETES DISEASE PREDICTION (PIDDP)

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Work Flow of The Projects

1. Data collection
2. EDA
3. Feature Engineering
4. ML model fitting
5. ML model Optimization
6. Prediction
7. Accuracy Comparison
8. Hosting on Local server

Future Scope

1. Rule-Based Systems
2. ML-Based Systems
3. Hybrid Systems
4. Productionized ML applications using MLops
5. Thesis writing

Rule-based systems :

A rule-based system is a set of predefined rules to make decisions or provide recommendations. The system evaluates the data against the stored rules and performs a certain action based on the mapping.

Below are a few examples:

Fraud Detection:

In fraud detection, rule-based systems can be used to flag and investigate suspicious transactions based on predefined rules quickly.

ML-based systems :

Machine Learning (ML) systems use algorithms to learn from data and make predictions or take actions without being explicitly programmed to do so. ML systems use the knowledge gained by being trained on large amounts of data to make predictions and decisions for new data. ML algorithms can improve their performance as more data is used for training. ML systems include natural language processing, image, and speech recognition, predictive analytics, etc.

Fraud detection : a bank might use an ML system to learn from past fraudulent transactions and identify potential fraudulent activity in real time. Or, it might reverse engineer the system and look for transactions that look very "outlierish".

Healthcare : a hospital might use an ML system to analyze patient data and predict the likelihood of a patient developing a certain disease based on some X-rays.

Hybrid systems:

combining rule-based systems and machine learning algorithms, have become increasingly popular recently. They can provide more robust, accurate, and efficient results, particularly when dealing with complex problems.

Productionized ML applications using MLOps

1. Cotinuous Integration (CI)
2. Continuous Delevery(CD) &
3. Continuous Trainign (CT)

Thank You