



Department of Computer Science and Engineering

MEDICAL DIAGNOSIS USING MACHINE LEARNING

Under the guidance of
Dr Saravana Kumar

By
SURYA GANGARAJ K

1DT15CS115

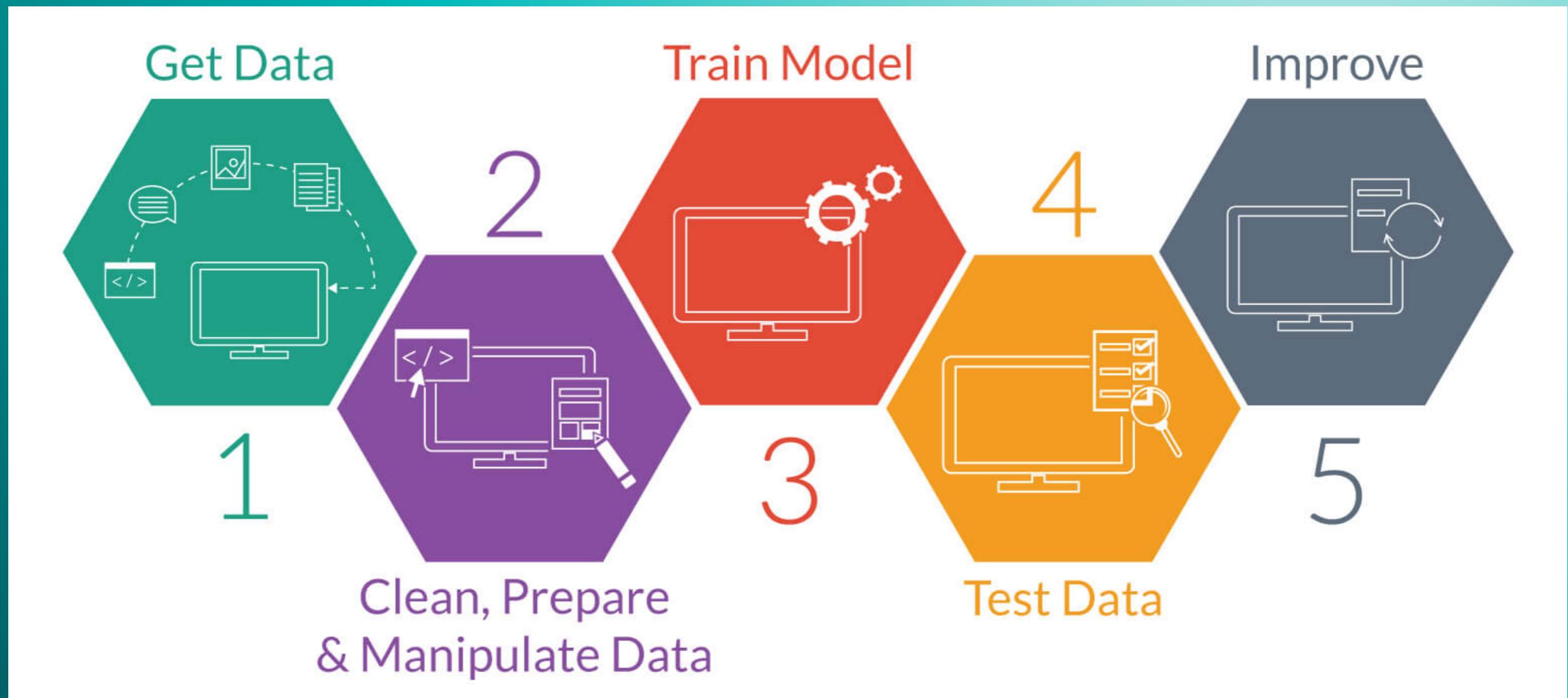
CONTENTS

- INTRODUCTION
- DISEASE PREDICTION
- SYSTEM OVERVIEW
- IMPLEMENTATION
- EXPERIMENTS AND RESULTS
- REFERENCES

INTRODUCTION

- Machine learning for heart disease diagnosis.
- Machine learning algorithms like Naive Bayesian[2], Back Propagation[3] and Decision Tree[4] based classification are used.
- 327 patients - each verified by physician before entering into the model.

DISEASE PREDICTION

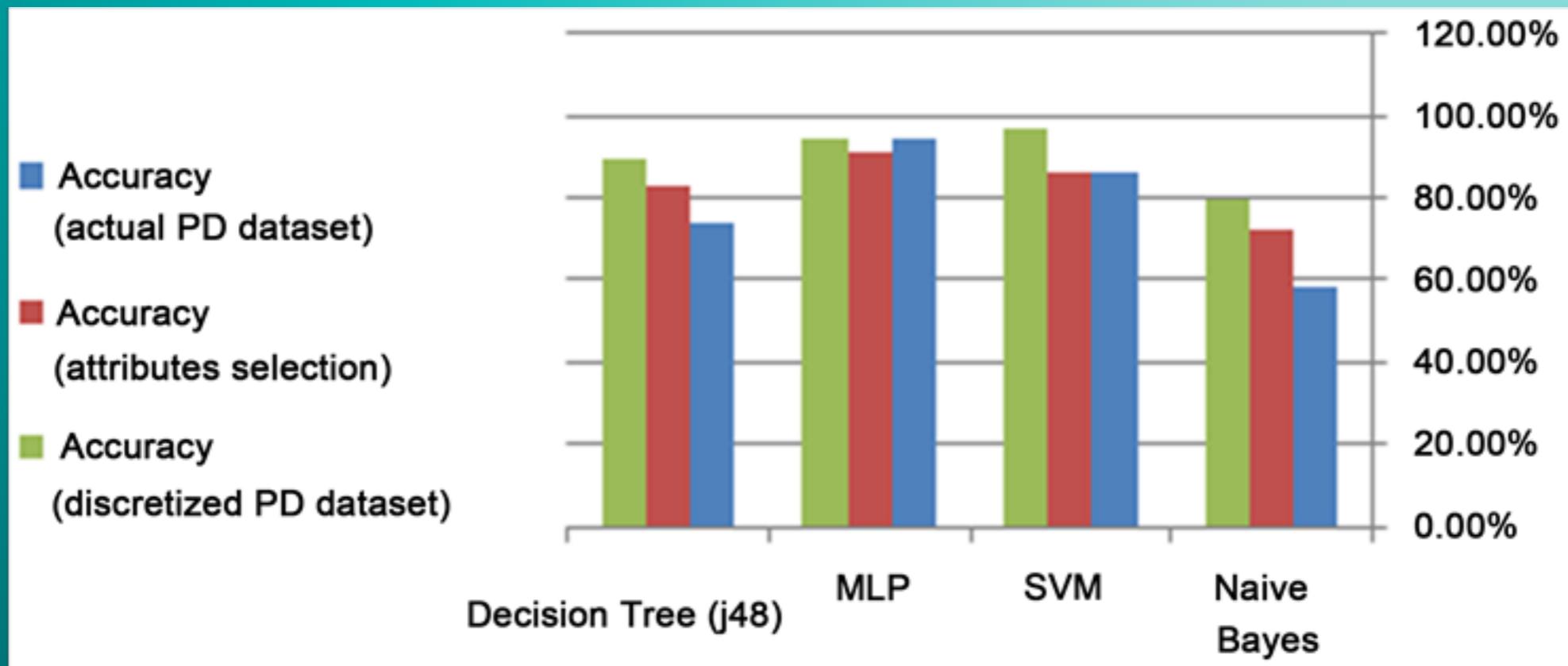


SYSTEM OVERVIEW



IMPLEMENTATION

- Naive Bayes
- SVM
- Decision tree



EXPERIMENTS AND RESULTS

- Experiments with some of the utilized algorithms are:

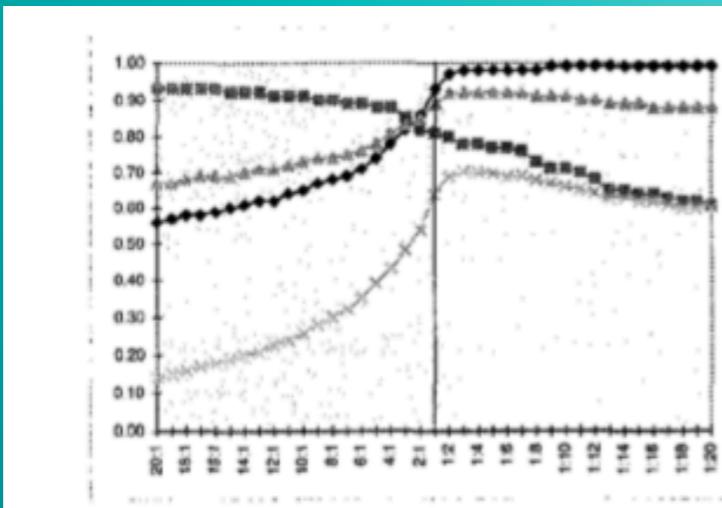


Figure 1. Naive Bayesian classifier

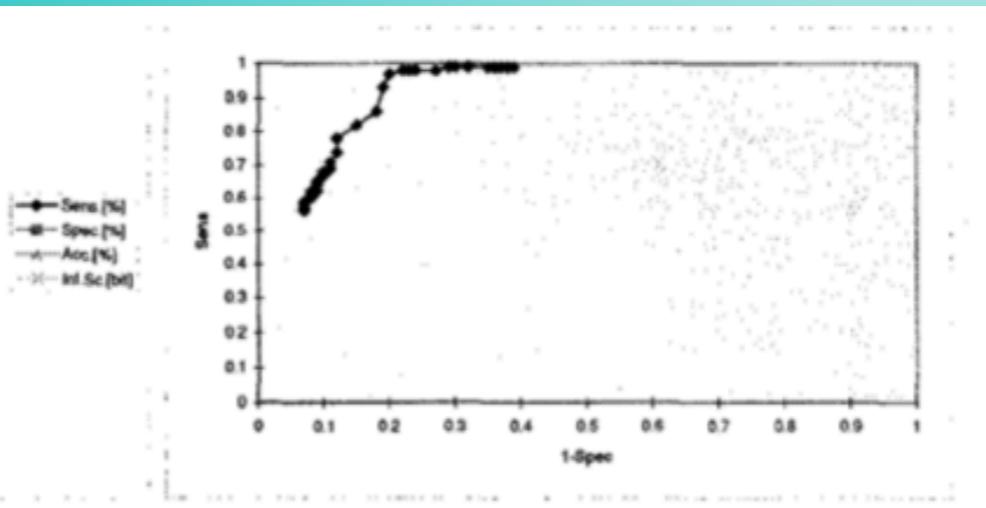


Figure 2. Naive Bayesian classifier - ROC curve

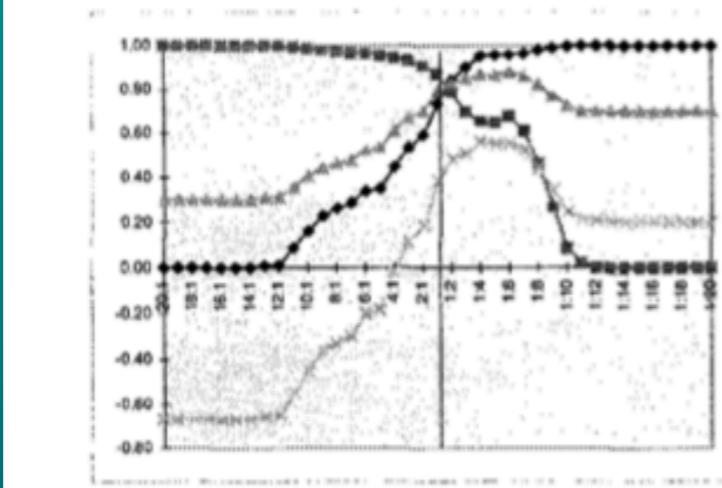


Figure 3. Neural net

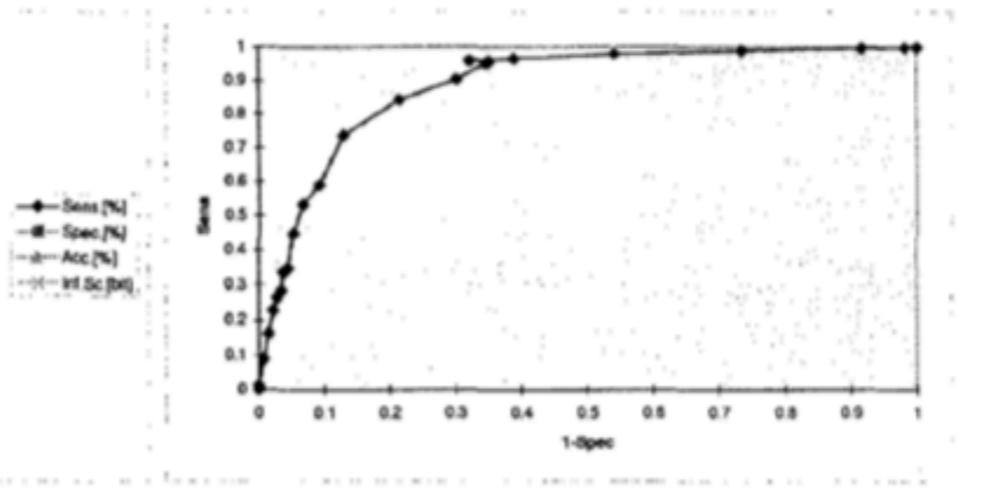


Figure 4. Neural net - ROC curve

REFERENCES/BIBLIOGRAPHY

1. IEEE Paper - <https://ieeexplore.ieee.org/document/596411>
2. Naive Bayes classifier - en.wikipedia.org/wiki/Naive_Bayes_classifier
3. Neural Networks - <neuralnetworksanddeeplearning.com/chap2.html>
4. Decision Tree - https://en.wikipedia.org/wiki/Decision_tree
5. Book 1- Machine Learning in Medicine - a Complete Overview
6. Book 2- Machine Intelligence for Healthcare

THANK YOU