Team Members

Isha Goel – 102183055

Akshat Khosla – 102053026

Submitted to

Shikha Sharma

Project

**HEALTH DIAGNOSES**

Logo, company name

Description automatically generated

THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY,

Patiala

Aim:

To predict the disease based on the symptoms given by the user.

Theory:

Accurate and on-time analysis of any health-related problem is essential for preventing and treating the illness. The traditional way of diagnosis may not be sufficient in the case of a severe ailment. Developing a medical diagnosis system based on machine learning (ML) algorithms to predict any disease can help in a more accurate diagnosis than the conventional method.

We have designed a health diagnosis system using multiple ML algorithms. The data set used had more than 230 diseases for processing. Based on an individual's symptoms, the diagnosis system gives the output as the disease that the individual might be suffering from. Our diagnosis model can act as a doctor for the early diagnosis of a disease to ensure the treatment can take place on time and lives can be saved.

Datasets:

The central part of our machine learning project is the training and testing of the model. The training and testing files are prototype.csv and prototype-1.csv, respectively. We retrieved these datasets from Kaggle.

Implementation:

Tested the performance of three machine learning algorithms - Naive Bayes, Decision Tree, and Random Forest and achieved the best-case accuracy of 95.12%. The technical stack includes Python, Scikit-learn, and Tkinter(for GUI stuff).

Prediction criteria:

If the prediction by any of the two algorithms is identical, then the user might have that disease. Else, the machine cannot predict the disease.

GUI stuff:

We have used Tkinter for our GUI (Graphical User Interface).  Python with tkinter is the fastest and easiest way to create the GUI applications.

Design for GUI for users to enter their symptoms and get the predictions:

