CAPSTONE PROJECT

DISEASE PREDICTION

Student Name : SHIVANSHU DWIVEDI
College Name & Department : JAI NARAIN COLLEGE OF TECHNOLOGY (BHOPAL) $ ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

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OUTLINE

- Problem Statement
- Technology used
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- Future scope

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PROBLEM STATEMENT

A ROBUST MACHINE-LEARNING MODEL THAT CAN EFFICIENTLY PREDICT THE DISEASE OF A HUMAN, BASED ON THE SYMPTOMS THAT HE/SHE POSSESSES

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TECHNOLOGY USED

Support Vector Machines (SVM): *A popular algorithm for classification and regression problems*

Random Forest (RF): *A popular algorithm that can be effective across different medical conditions*

Decision Tree (DT): *An algorithm that uses a divide-and-conquer approach*

K-Nearest Neighbor (KNN): *A nonparametric algorithm that can be used for classification and regression*

Naïve Bayes (NB): *A probabilistic classifier that uses Bayes theorem to predict the probability of a class for a given data point*

Logistic Regression (LR): *An algorithm used to solve classification problems*

AdaBoost: *An algorithm developed by Yoav Freund and Robert Schapire*

Deep learning (DL): *An ML algorithm that can be used for disease prediction*

Artificial neural network (ANN): *An ML algorithm that can be used for disease prediction*

Boosting algorithms: *An ML algorithm that can be used for disease prediction*

WOW FACTORS

The proposed system aims to find the disease road map via the patient's common attributes, which might be gathered through a physical examination or by remote devices that collect data from patients found in the database

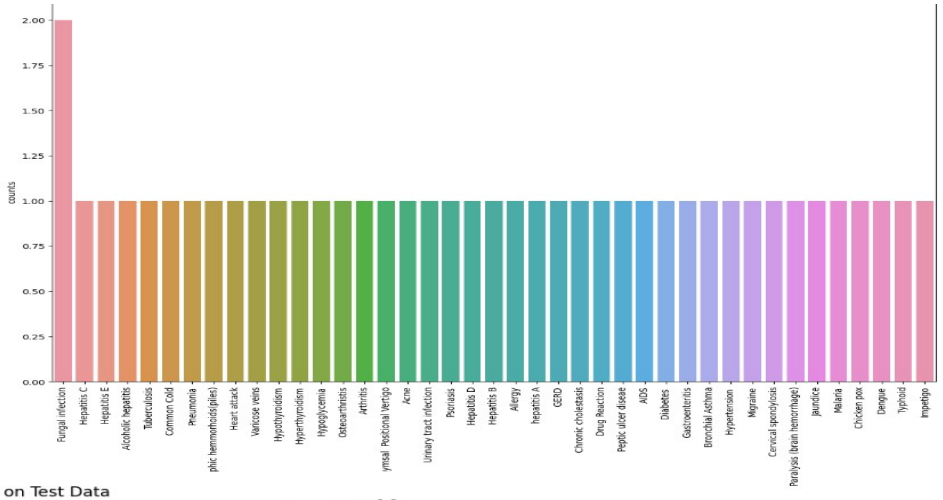
The machine-learning method automatically predicts diseases with typical symptoms or attributes using NEIL (Never-Ending Image Learner). This program is used to learn from the information in an image based on the relationships between the objects in the image and predict the factors of diseases

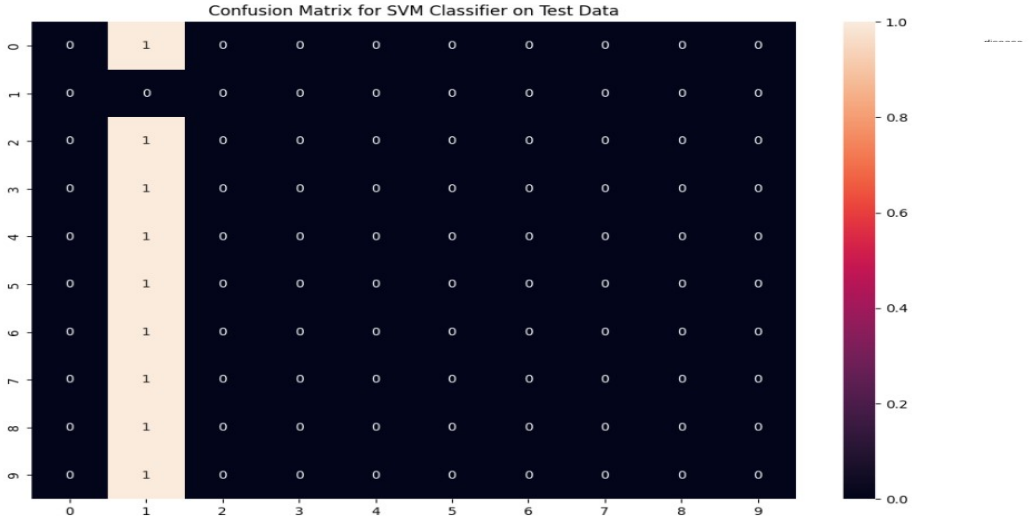
isotropic positioning is the probability distribution over the vectors used for more profound image storage concerning the random matrix.

Machine learning (ML) was used to develop the algorithm for improving the automation process with experience and use of any data, and the model building was based on the training data for the prediction and decision-making process. ML can be used advantageously in healthcare, as the considerable numbers of medical data reduce ML's burden with predicting data

RESULTS

	itching	skin_rash	nodal_skin_eruptions	continuous_sneezing	shivering	chills	joint_pain	stomach_pain	acidity	ulcers_on_ton
0	1	1	1	0	0	0	0	0	0	0
1	0	1	1	0	0	0	0	0	0	0
2	1	0	1	0	0	0	0	0	0	0
3	1	1	0	0	0	0	0	0	0	0
4	1	1	1	0	0	0	0	0	0	0
...	...	...	...	...	...	...	...	...	...	...
4915	0	0	0	0	0	0	0	0	0	0
4916	0	1	0	0	0	0	0	0	0	0
4917	0	0	0	0	0	0	0	0	0	0
4918	0	1	0	0	0	0	1	0	0	0
4919	0	1	0	0	0	0	0	0	0	0





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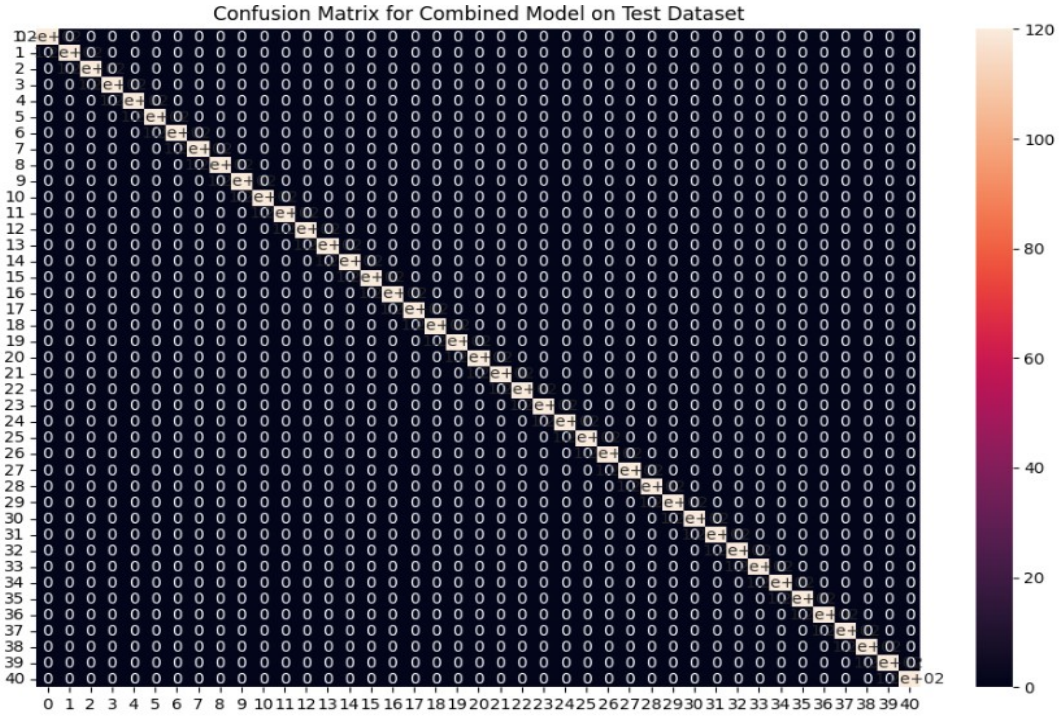
CONCLUSION

- Machine learning can analyze large data sets and identify patterns that humans can't.
- It can help improve healthcare by aiding in early detection and risk assessmen



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GITHUB LINK

- Make sure that there should be readme file
- https://github.com/githubshivans/DISEASE-PREDICTION-USING-ML

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FUTURE SCOPE(OPTIONAL)

- The future scope of disease prediction using machine learning looks promising, with potential for significantly improved accuracy, wider disease coverage, personalized predictions, and integration with advanced imaging technologies, allowing for earlier detection and preventative measures in healthcare by identifying high-risk individuals through analysis of large datasets and complex medical information.
- Key areas of future development include:
- Expanded Disease Spectrum:
- Including a wider range of diseases beyond common ones, enabling prediction for complex and rare conditions.
- Enhanced Accuracy and Precision:
- Continuous refinement of machine learning algorithms to minimize false positives and improve prediction accuracy.
- Integration of Advanced Imaging:
- Utilizing advanced imaging modalities like MRI, CT scans, and genetic data for more detailed analysis and improved disease prediction.

THANK YOU

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