**[1].Feasible Prediction of Multiple Diseases using Machine Learning**

* The paper looks at how computers can help predict diseases by using something called Machine Learning (ML).
* ML is really helpful in spotting patterns, making fewer mistakes, and making better decisions in different areas, according to the authors.
* They talked about how AI (Artificial Intelligence) is making a big impact in many fields.
* The authors discussed using ML to identify different types of texts and even to detect online scams.
* They also explored how ML, especially a type called Convolutional Neural Networks (CNN), can be used to recognize handwriting, like the names of Telugu movies, with high accuracy.
* Another topic they covered was using smart systems called Intelligent Decision Support Systems (IDSS) to help doctors make better choices, especially when dealing with heart disease.
* They suggested using data mining techniques to predict how common diseases might become based on symptoms, which could help hospitals plan better.
* The paper compared different methods, like Random Forest and CNN, to predict heart attacks using patient records, finding that Random Forest worked better.
* The main aim of the paper is to see how computer programs that learn from data can help catch diseases earlier and more accurately.
* They used various techniques, like ML algorithms, CNN, and Support Vector Machines (SVM), in different studies to do this.
* The authors also talked about how ML is being used in other areas like solving crimes, building robots, and even studying images from space.
* They stressed the importance of looking at how diseases relate to each other and sharing risk factors when predicting someone's overall health.
* Overall, the paper shows how using computers to learn from data can help improve healthcare by spotting diseases early and making better decisions.

**[2]. Disease prediction from various symptoms using machine learning**

* + The research paper authored by Keniya et al. focuses on disease prediction utilizing machine learning algorithms, considering symptoms, age, and gender as key factors.
  + The study underscores the critical importance of timely and precise analysis of health issues for effective prevention and treatment strategies.
  + Keniya et al. developed a medical diagnosis system incorporating multiple machine learning algorithms to predict more than 230 diseases.
  + Among the tested algorithms, the weighted KNN (K-Nearest Neighbors) algorithm emerged as the most accurate, achieving an impressive accuracy rate of 93.5%.
  + The authors conducted a comparative analysis of various machine learning models, revealing differing levels of accuracy.
  + The Fine KNN model attained an accuracy of 80.3%, while the Medium KNN model achieved 61.8%. In contrast, the Coarse KNN model demonstrated the lowest accuracy at 5.3%.
  + Notably, the Weighted KNN model outperformed other models, indicating its efficacy in disease prediction.
  + Additionally, other models such as Gaussian Naïve Bayes, Kernel Naïve Bayes, Subspace KNN, and RUSBoosted Trees exhibited varying accuracy levels.
  + In a separate study conducted by Mir et al., different machine learning models were compared for disease prediction, achieving an overall accuracy of 79.13%.
  + Khourdifi et al. utilized the KNN model, reporting an outstanding accuracy of 99.7%.
  + Vijayarani et al. employed the SVM (Support Vector Machine) model with an accuracy of 79.66%.
  + Other models tested in different studies include HRFLM, Simple CART, and Random Forest, each demonstrating varying degrees of accuracy in disease prediction.
  + The comprehensive literature review underscores the importance of leveraging machine learning algorithms for disease prediction based on symptoms, age, and gender, with the weighted KNN algorithm showing promising results for accurate disease prognosis.

**[3].Human Disease Prediction using Machine Learning Techniques and Real-life Parameters**

* **Introduction to Disease Prediction Models:** The paper delves into the realm of disease prediction, specifically focusing on utilizing symptoms as input data. It begins by providing an overview of existing literature in this field, highlighting previous methodologies and their limitations.
* **Proposal of a Novel Model:** Recognizing the shortcomings of earlier methods, the authors propose a new model aimed at enhancing the accuracy of disease prediction. This new model is designed to address the challenges faced by previous approaches, thereby increasing effectiveness in prognosis.
* **Methodologies Employed:** The paper outlines the methodologies used, which include employing the Support Vector Machine (SVM) for disease classification. Additionally, the Random Forest Algorithm is utilized to generate decision trees for both regression and categorization tasks.
* **Experimental Testing:** The authors conduct experiments to validate the efficacy of their proposed model. These experiments involve testing multiple models, including those discussed in the literature review section, to compare their performance against the proposed approach.
* **High Accuracy Achieved:** Results from the experiments indicate that the proposed model, particularly the Random Forest algorithm, achieved an impressive accuracy rate of 97%. This outperforms earlier methods such as Naive Bayes and SVM models.
* **Comprehensive Methodology:** The methodology section demonstrates a comprehensive approach to disease prediction, leveraging advanced machine learning algorithms like SVM and Random Forest to enhance accuracy.
* **Superiority of Random Forest Model:** The Random Forest model emerges as particularly effective in predicting diseases based on symptoms, showcasing its superiority over other models.
* **Detailed Analysis of Results:** The results section provides a detailed analysis of the model's performance, offering insights into the effectiveness of the Random Forest model in disease prediction.
* **Comparative Analysis:** A comparative analysis of different models' accuracy rates underscores the superiority of the proposed Random Forest model, reaffirming its efficacy in disease prognosis.
* **Contribution to Disease Prediction Systems:** In conclusion, the paper makes a significant contribution to disease prediction systems by introducing a novel model with a high accuracy rate of 97%.
* **Addressing Limitations of Earlier Methods:** The proposed methodology addresses the limitations of earlier approaches, demonstrating the potential for automation in disease prediction, which could greatly benefit the healthcare industry.
* **Consideration of Geographic Factors:** The paper highlights the importance of incorporating geographic data into disease prediction models to account for location-specific symptoms, thus enhancing prediction accuracy.
* **Utilization of Hyperparameters:** The proposed model leverages hyperparameters in the Random Forest algorithm to improve efficacy and accuracy. Fine-tuning the model with hyperparameters yields better performance compared to standard approaches, showcasing the importance of optimization techniques.
* **Holistic Approach to Disease Prediction:** Emphasizing the need for improved disease prediction models, the paper advocates for considering factors beyond symptoms, such as geographic location and rare symptoms, to offer a more comprehensive approach to disease prognosis.
* **Automation of Healthcare Industries:** By incorporating advanced machine learning algorithms and considering additional variables, the proposed model contributes to the automation of healthcare industries, streamlining patient treatment and enhancing overall efficiency in healthcare systems.