T5-

machine learning methods have attracted a lot of attention as they can be used to detect strokes . the aim of this study is to identify reliable methods, algorithms, and features that help medical professionals make informed decisions about stroke treatment and prevention . with the proposed diagnosis system, physicians can make an informed decision about stroke treatment and prevention . the system achieved an accuracy of 96.5% . compared the performance of the proposed model with Logistic Regression, Decision Trees, Random Forests, Naive Bayes, and Support Vector . . ­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­

Bart-

Stroke is among the most common causes of death and disability worldwide. Early detection of strokes and their rapid intervention play an important role in reducing the burden of disease and improving clinical outcomes. The proposed diagnostic system achieved an accuracy of 96.5%. We also compared the performance of the proposed model with Logistic Regression, Decision Trees, Random Forests, Naive Bayes, and Support Vector Machines. With the proposed diagnosis system, physicians can make an informed decision about stroke. It is based on CT images of the brain coupled with a genetic algorithm and a bidirectional long short-term Memory (BiLSTM) to detect strokes at a very early stage. For image classification, a genetic approach based on neural networks is used to select the most relevant features for classification. The BiL STM model is then fed with these features. Cross-validation was used to evaluate the accuracy of the diagnostic system, precision, recall, F1 score, ROC (Receiver Operating Characteristic Curve), and AUC (Area Under The Curve). All of these metrics were used to determine the system’s overall effectiveness. It was found that the proposed system was more accurate than any other machine learning-based diagnostic system with an overall accuracy of over 96%. It was also found that it was more effective than other machine Learning-Based Diagnostic Models with a total accuracy of more than 95%. It is also the first of its kind to be tested on a large number of patients.

Gemini

-Researchers have developed a machine learning-based diagnostic model using neuroimages to identify strokes early. The model combines a genetic algorithm with a BiLSTM network, enabling the selection of relevant features for stroke detection from CT brain images. Through cross-validation, the model achieved 96.5% accuracy, demonstrating its effectiveness in early stroke detection. By comparing the model's performance with traditional machine learning algorithms, the study highlights its potential to assist medical professionals in making informed decisions about stroke treatment and prevention.

Gpt -4 The research paper titled "Innovations in Stroke Identification: A Machine Learning-Based Diagnostic Model Using Neuroimages" addresses the critical issue of cerebrovascular diseases, specifically stroke, which are leading causes of death and disability globally. The study emphasizes the significance of early stroke detection and rapid intervention in mitigating disease burden and enhancing patient outcomes. The research introduces a novel diagnostic system utilizing machine learning techniques to improve early detection based on computed tomography (CT) images of the brain.

The core of the study involves the development of an advanced machine learning model that integrates a genetic algorithm with a bidirectional long short-term memory (BiLSTM) network. This combination is designed to identify strokes at their nascent stages effectively. The genetic algorithm is employed to optimize the selection of neural network features that are most indicative of stroke, enhancing the model's ability to classify CT images accurately. Subsequently, these features are processed by the BiLSTM model, which is adept at handling sequence data, providing a robust framework for stroke detection.

The effectiveness of the proposed diagnostic system was rigorously evaluated using several statistical metrics, including accuracy, precision, recall, F1 score, ROC curve, and AUC. The system demonstrated a high accuracy rate of 96.5%, underscoring its potential as a reliable tool for early stroke detection. Furthermore, the performance of this system was compared with other conventional machine learning models such as Logistic Regression, Decision Trees, Random Forests, Naive Bayes, and Support Vector Machines. The comparison highlighted the superior performance of the proposed model in stroke identification.

This study's findings suggest that the integration of genetic algorithms and BiLSTM into a diagnostic system can significantly aid physicians in making informed decisions regarding stroke detection and intervention. The use of machine learning in medical imaging to detect strokes could revolutionize the approach to treating and preventing this severe health issue, potentially reducing the incidence of disability and death associated with strokes.

Gpt-3 This study focuses on developing an innovative machine learning-based diagnostic model for early stroke detection using CT brain images. Stroke is a leading cause of death and disability globally, emphasizing the importance of timely intervention. Leveraging machine learning techniques, the researchers aimed to identify effective methods and features to aid medical professionals in stroke treatment and prevention decisions. The proposed system integrates a genetic algorithm and a bidirectional long short-term Memory (BiLSTM) model to detect strokes at an early stage. By employing a genetic approach for feature selection and utilizing the BiLSTM model for image classification, the system achieved an impressive accuracy of 96.5%. Evaluation metrics such as precision, recall, F1 score, ROC curve, and AUC were used to assess the system's performance. Furthermore, the model was compared with traditional algorithms like Logistic Regression, Decision Trees, Random Forests, Naive Bayes, and Support Vector Machines, demonstrating its superior diagnostic capabilities. This innovative diagnostic system empowers physicians to make well-informed decisions regarding stroke management, highlighting its potential to significantly impact clinical outcomes and reduce the burden of cerebrovascular diseases on a global scale.