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(54) Title of the invention : A ROBUST AND INTERPRETABLE MACHINE LEARNING MODEL FOR MEDICAL DIAGNOSIS AND METHOD THEREOF

(51) International classification :G06N0020000000, G16H0050200000, G16H0010600000, G16H0080000000, G06Q0040080000	**(71)Name of Applicant :** **1)Dr. Sumit Kumar Mishra** Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Galgotias University, Gautam Buddh Nagar, Greater Noida, Uttar Pradesh, India (UP), Pin: - 203201 ———— ——— **2)Mr. Raghu Veer** **3)Mr. Gaurav Vinchurkar** **4)Ms. Sowmya N** **5)Mr. Atul Verma** **6)Mr.T.Muruganantham** **Name of Applicant : NA** **Address of Applicant : NA** **(72)Name of Inventor :**
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(57) Abstract :
This invention introduces a robust and interpretable machine learning model tailored for medical diagnosis, designed to address the challenges of integrating artificial intelligence into healthcare diagnostics with a focus on transparency and actionability. Unlike existing solutions, which often compromise either accuracy for interpretability or vice versa, this model achieves a high degree of both. It employs advanced data processing and machine learning algorithms to accurately analyze diverse and complex medical datasets, including imaging, genetic information, and clinical notes. A key feature of this model is its novel interpretability framework, which enables healthcare professionals to understand the rationale behind each diagnosis. This feature not only facilitates greater trust in the AI's diagnostic recommendations but also enhances decision-making by providing clear, actionable insights derived from data analysis. The model is designed to be adaptable across various medical specialties, offering a scalable solution to improve diagnostic accuracy, efficiency, and patient outcomes in the healthcare industry. Accompanied Drawing [FIGS. 1-2]

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