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(54) Title of the invention : A DISEASE PREDICTION SYSTEM USING MACHINE LEARNING

<p>(51) International classification :G16H0050200000, G16H0010600000, G06N0020000000, G16H0050300000, A61B0005000000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY Address of Applicant :19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Gautam Buddha Nagar ----- Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)RISHABH ANAND Address of Applicant :NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY, 19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Gautam Buddha Nagar ----- 2)MS. ROSHNI PRASAD Address of Applicant :NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY, 19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Gautam Buddha Nagar ----- 3)MR. RAJAT KUMAR Address of Applicant :NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY, 19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Gautam Buddha Nagar -----</p>
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(57) Abstract :

Disclosed herein is a disease prediction system using machine learning (100) comprises a data acquisition module (102), configured to collect heterogeneous health-related data from a plurality of sources. The system also includes a data preprocessing engine (104), configured to perform one or more preprocessing operations on the acquired data. The system also includes a machine learning modeling component (106), configured to process the preprocessed multi-modal data to generate disease risk scores or diagnostic predictions. The system also includes a personalized inference engine (108), configured to integrate clinical, genomic, imaging, and behavioral data associated with a patient. The system also includes a cloud-based storage and computational infrastructure (110), configured to store the raw, preprocessed, and model-generated data. The system also includes a graphical user interface (GUI) (112), configured to receive patient-specific input, display prediction results, and provide visual interpretability tools.

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