

(54) Title of the invention : MACHINE LEARNING BASED PREDICTION OF CARDIOVASCULAR DISEASES AND CHANCES OF SURVIVAL FOR A PATIENT IN CARDIAC ARREST

<p>(51) International classification :G16H0050300000, G06N0020000000, G16H0050500000, A61P0009040000, G16H0050200000</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 :  <b>1)Dr. Priyanka Chandani</b>  Address of Applicant :Associate Professor &amp; Head (DS, AI, CSBS) NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>2)Lovely</b>  <b>3)Dr. Nupa Ram</b>  <b>4)Amarpal Yadav</b>  <b>5)Tushar Mehrotra</b>  <b>6)Yaduvir Singh</b>  <b>7)Bhoomika Kaushik</b>  <b>8)Nishu Niharika</b>  <b>9)Priyanka Belwal</b>  <b>10)Akancha</b>  Name of Applicant : NA  Address of Applicant : NA  (72)Name of Inventor :  <b>1)Dr. Priyanka Chandani</b>  Address of Applicant :Associate Professor &amp; Head (DS, AI, CSBS) NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>2)Lovely</b>  Address of Applicant :Assistant Professor, Department of Biotechnology, NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>3)Dr. Nupa Ram</b>  Address of Applicant :Associate Professor College of Computing Sciences &amp; IT, Teerthanker Mahaveer University, Moradabad (U.P) -----  ---  <b>4)Amarpal Yadav</b>  Address of Applicant :Assistant Professor, Department of CSE(AI), NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>5)Tushar Mehrotra</b>  Address of Applicant :Assistant Professor, Department of CSE(AI), NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>6)Yaduvir Singh</b>  Address of Applicant :Assistant Professor, Department of CSE(AI), NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>7)Bhoomika Kaushik</b>  Address of Applicant :Assistant Professor, Department of CSE(AI), NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>8)Nishu Niharika</b>  Address of Applicant :Assistant Professor, Department of CS NIET, Gr. Noida, 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>9)Priyanka Belwal</b>  Address of Applicant :Assistant Professor, Department of CSE(AI), NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  ---  <b>10)Akancha</b>  Address of Applicant :Assistant Professor, Department of CSE(AI), NIET, Gr. Noida 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh – 201306 -----  -----</p>
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(57) Abstract :  
The present disclosure relates to a prediction method of cardiovascular diseases and chances of survival for a patient in cardiac arrest using machine learning based method. Every year, almost 17 million individuals die from cardiovascular disorders, which primarily manifest as myocardial infarctions and heart failure. Coronary heart disease, cerebrovascular disease, rheumatic heart disease, and other illnesses are among the category of heart and blood vessel disorders known as CVDs. the present disclosure relates to a prediction method of cardiovascular diseases and chances of survival for a patient in cardiac arrest using machine learning based method. The medical records of patients having cardiac arrest was analyzed and traditional biostatistics time-dependent methods were employed to the dataset to predict mortality and identify the key features of patients suffering from heart failure. Furthermore, to analyze the findings standard biostatistics methods were applied leaving room for machine learning approaches. Several data mining techniques to predict survival of the patients were applied. The results indicate that the most accurate predictions can be made using just two clinical parameters from the dataset—serum creatinine and ejection fraction.

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