(12) PATENT APPLICATION PUBLICATION   (21) Application No.202441013750 A

(19) INDIA

(22) Date of filing of Application :26/02/2024   (43) Publication Date : 08/03/2024

(54) Title of the invention : METHOD AND APPARATUS FOR PREDICTING TRAFFIC CONGESTION USING MACHINE LEARNING AND IOT DATA

(51) International classification	:G08G0001010000, G06N0020000000, G01C0021340000, G06Q0050000000, G08G0001096800
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)Name of Applicant :
  1)Dr G.V.Sriramakrishnan
    Address of Applicant :Professor, Department of Computer Science and Engineering Saveetha Institute of Medical and Technical Sciences (SIMATS), Saveetha University, Chennai, Tamil Nadu 602105 Chennai ----------- -----------
  2)Dr R Velumani
  3)Dr.A.Parameswari
  4)Dr. Ch.Vidyadhari
  5)Dr.T. Daniya
  6)Dr Malini Muthupandian
  7)Dr.P.G.Om Prakash
  8)Dr.C.Priya
  9)Dr.R.Umamaheswara Rao
  10)Dr.B.Santhosh Kumar
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
  1)Dr G.V.Sriramakrishnan
Address of Applicant :Professor, Department of Computer Science and Engineering Saveetha Institute of Medical and Technical Sciences (SIMATS), Saveetha University, Chennai, Tamil Nadu 602105 Chennai ----------- -----------
  2)Dr R Velumani
Address of Applicant :Associate Professor, Department of Computer Science and Engineering Gayatri Vidya Parishad College of Engineering Madhurawada Visakhapatnam Andhra Pradesh 530048 Madhurawada ----------- -----------
  3)Dr.A.Parameswari
Address of Applicant :Assistant Professor, Postgraduate Department of Computer Science, Anna Adarsh College for Women, Chennai. Chennai ----------- -----------
  4)Dr. Ch.Vidyadhari
Address of Applicant :Associate Professor, Gokaraju Rangaraju Institute of Engineering and Technology Bachupally, Kukatpally, Hyderabad, Telangana 500090 Hyderabad ----------- -----------
  5)Dr.T. Daniya
Address of Applicant :Assistant Professor Department of CSE-AIML GMR Institute of Technology Rajam-532127, Andhra Pradesh Rajam ----------- -----------
  6)Dr Malini Muthupandian
Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Karpagam College of Engineering Coimbatore - 641032 Coimbatore ----------- -----------
  7)Dr.P.G.Om Prakash
Address of Applicant :Assistant Professor, Department of Computational Intelligence, School of Computing, SRM Institute of Science and Technology, Kattangalathur. Chennai ----------- -----------
  8)Dr.C.Priya
Address of Applicant :Professor, Faculty of Computer Applications, Dr. M. G. R. Educational and Research Institute Chennai 600095 Chennai ----------- -----------
  9)Dr.R.Umamaheswara Rao
Address of Applicant :Professor, Department of Mechanical Engineering Madhira Institute of Technology and Sciences, Kodad, Telangana Kodad ----------- -----------
  10)Dr.B.Santhosh Kumar
Address of Applicant :Professor & Head of Department, Department of Computer Science &Engineering, Guru Nanak Institute of Technology, Ibrahimpatnam Ranga Reddy(District) Telangana. 501506 Hyderabad ----------- -----------

(57) Abstract :
The present invention relates to a method and apparatus for predicting traffic congestion using machine learning and IoT data. The method utilizes real-time data from various sources, including sensors, GPS devices, and social media platforms, to train a machine learning model that can accurately predict traffic congestion. The apparatus includes a data collection module, a data processing module, a machine learning module, and a notification module. The system processes the collected data to extract relevant features, trains a machine learning model, and sends notifications to users who are likely to be affected by traffic congestion. The model takes into account various factors such as weather, time of day, and traffic incidents to make predictions. The system improves traffic flow and reduces travel times by providing accurate and timely information to drivers, helping them plan their routes and schedules accordingly. The invention has applications in intelligent transportation systems, traffic management, and autonomous vehicles.

No. of Pages : 7 No. of Claims : 2