

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511099383 A

(19) INDIA

(22) Date of filing of Application :15/10/2025

(43) Publication Date : 05/12/2025

(54) Title of the invention : A COMPUTER MODEL FOR REAL-TIME AIR POLLUTION FORECASTING

(51) International classification	:G06N0020000000, G06Q0050060000, G06F0030000000, G01N0033000000, H02J0003140000	(71) <b>Name of Applicant :</b> <b>1)NOIDA INSTITUTE OF ENGINEERING &amp; TECHNOLOGY</b> Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. Uttar Pradesh India
(31) Priority Document No	:NA	(72) <b>Name of Inventor :</b>
(32) Priority Date	:NA	<b>1)Dr. MEGHA GUPTA</b>
(33) Name of priority country	:NA	<b>2)RITESH KUMAR SINGH</b>
(86) International Application No	:	
Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The invention discloses a computer model for real-time air pollution forecasting comprising a Data Acquisition Module (101), Data Fusion and Preprocessing Module (102), Machine Learning Prediction Engine (103), Forecast Generation Unit (104), and User Interface/Alerting System (105). The model integrates heterogeneous datasets, employs hybrid machine learning, and continuously adapts to new inputs. Experimental validation demonstrates superior accuracy in short- and medium-term predictions. The system provides early warnings, interpretability, and scalability, supporting public health interventions and policy planning with enhanced efficiency and reliability.

No. of Pages : 16 No. of Claims : 6