(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2025
(21) Application No.202511032127 A
(43) Publication Date : 18/04/2025

(54) Title of the invention : SYSTEM AND METHOD FOR GAN MODELS OF MACHINE LEARNING

(51) International classification	:G06N0003045000, G06N0020000000, G06N0003080000, G06N0003047000, G06N0003088000
(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)Harsh khatter
Address of Applicant :54, Narayan Sadan, Anandi Pura, Gurudwara Road, Modinagar ---------- ----------
2)Dr. Rashmi Sharma
3)Chitvan Agrawal
4)Ashoka Tripathi
5)Dr. Deepti Gupta
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr. Rashmi Sharma
Address of Applicant :Professor CSE department, Noida institute of Engineering and Technology Greater Noida , Address 19, Institutional Area, Knowledge Park II, Greater Noida, Uttar Pradesh 201306 Greater Noida ---------- ----------
2)Chitvan Agrawal
Address of Applicant :Assistant Professor , CSE department Noida Institute of Engineering & Technology , Plot 19, Institutional Area , Knowledge Park II, Greater Noida Uttar Pradesh 201306 Greater Noida ---------- ----------
3)Ashoka Tripathi
Address of Applicant :Assistant Professor, CSDS department, Galgotias College of Engineering & Technology, 1, Knowledge Park-II, Greater Noida, Uttar Pradesh 201310 Greater Noida ---------- ----------
4)Dr. Deepti Gupta
Address of Applicant :Professor , CSBS department, Noida Institute of Engineering & Technology Plot 19, Institutional Area , Knowledge Park II, Greater Noida, Uttar Pradesh 201306 Greater Noida ---------- ----------
5)Dr. Harsh Khatter
Address of Applicant :KIET Group of Institutions, Delhi-NCR, Ghaziabad, Uttar Pradesh, India 201206 Ghaziabad ---------- ----------

(57) Abstract :
The present invention discloses a system and method for training and optimizing Generative Adversarial Networks (GANs) in machine learning applications. The invention introduces an adaptive learning framework comprising a generator module, a discriminator module, a loss optimization module, and an adaptive learning mechanism. The proposed method dynamically adjusts learning rates, prevents mode collapse, and ensures efficient training using reinforcement learning techniques. The system improves GAN performance across various domains, including image synthesis, anomaly detection, and data augmentation.

No. of Pages : 16 No. of Claims : 5