(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/11/2025
(21) Application No.202511106463 A
(43) Publication Date : 26/12/2025

(54) Title of the invention : AN AI-ENABLED FRAMEWORK FOR AUTOMATED MEDICAL IMAGE SEGMENTATION

(51) International classification	:G06N 3/098, G06F 21/57, G06N 10/80, G06G 7/06, G06D 5/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY
Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. Uttar Pradesh India
(72)**Name of Inventor :**
1)PITAMBER ADHIKARI
2)Dr. PRABHA SHREERAJ NAIR

(57) Abstract :
The present invention relates to an AI-enabled framework (101) for automated medical image segmentation. The system comprises an image acquisition unit (102), pre-processing module (103), deep learning segmentation engine (104), cloud-supported computational platform (105), explainable AI unit (106), and federated learning interface (107). The framework ensures accurate, scalable, and interpretable segmentation across multiple medical imaging modalities while preserving patient data privacy. This invention improves diagnostic efficiency, reduces clinical workload, and enhances trust in AI-driven medical imaging, making it suitable for real-world healthcare applications.

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