

पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
OF
THE PATENT OFFICE**

निर्गमन सं. 33/2026
ISSUE NO. 33/2026

शुक्रवार
FRIDAY

दिनांक: 14/08/2026
DATE: 14/08/2026

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202641096354 A

(19) INDIA

(22) Date of filing of Application :10/08/2026

(43) Publication Date : 14/08/2026

(54) Title of the invention : System and Method for Multimodal Confidence-Weighted Emotion Fusion and Safety-Override Response Generation in Interactive Robots

(51) International classification	:B25J 9/16, G10L 25/63, B25J 11/00, B25J 13/08, G10L 15/22	(71)Name of Applicant : 1)NARSIMHA REDDY ENGINEERING COLLEGE (NRCM) Address of Applicant :Survey No, 518, Hanuman Temple Rd, Maisammaguda, Kompally, Secunderabad, Hyderabad, Telangana 500100 Hyderabad Telangana India (72)Name of Inventor : 1)Mohammed Zainullabuddin 2)Nelli Manoj Venkata Sai Ram 3)Sonkamble Komal 4)Polabathini Sathwika 5)Poturi.Sri Lakshmi
(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	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A smart interactive robot system and method employing multimodal confidence-weighted emotion fusion and safety-override response generation is disclosed. A facial expression sensing module (110), a voice tone sensing module (112), and a touch and proximity sensing module (114) each compute an emotional-state indicator and an associated confidence value. A multimodal fusion engine (116), comprising a confidence-weighted arbitration sub-engine (118), computes a fused emotional-state score by weighting each indicator by its confidence value and resolving detected discrepancies. A user identification module (120) retrieves a personalisation profile from a local personalisation profile database (122) without remote transmission. An adaptive response generation module (124) generates a verbal response, gesture profile, and movement speed profile, executed by an actuator control module (126). A safety monitoring module (128) and safety override module (130) operate independently, overriding generated gestures with unconditional priority upon detecting an unsafe proximity or torque condition, enabling expressive yet safe interaction.

No. of Pages : 25 No. of Claims : 10