(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441031091 A

(19) INDIA

(22) Date of filing of Application :18/04/2024

(43) Publication Date : 26/04/2024

(54) Title of the invention : ARMAMENTS DETECTION SYSTEM USING AUTOMATED LEARNING ALGORITHMS

(51) International classification	:G06N0003040000, G06K0009620000, H04N0007180000, G06N0003080000, G08B0013196000
(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)**Botcha Kishore Kumar**
   Address of Applicant :CMR Engineering College, Kandlakoya, Medchal, Hyderabad, Telangana, 501401 ----------- -----------
 2)**Upendra Kumar Acharya**
 3)**M.Rithvik,**
 4)**Dr.K.Narasimha Raju**
 5)**M V Rama Sundari**
 6)**Dr. Ch. Asha Immanuel Raju**
 7)**Dr.I.Lakshmi**
 8)**TVL Srinivasa Rao**
 9)**Dr. R. Santhoshkumar**
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
 1)**Botcha Kishore Kumar**
Address of Applicant :CMR Engineering College, Kandlakoya, Medchal, Hyderabad, Telangana, 501401 ----------- -----------
 2)**Upendra Kumar Acharya**
Address of Applicant :GLA University, Mathura, Uttar Pradesh, 281406 ----------- -----------
 3)**M.Rithvik**
Address of Applicant :Gayatri Vidya Parishad College of Engineering(Autonomous), Madhurawada, Visakhapatnam, Andhra Pradesh, India, - 530 048 ----------- -----------
 4)**Dr.K.Narasimha Raju**
Address of Applicant :Gayatri Vidya Parishad College of Engineering(Autonomous), Madhurawada, Visakhapatnam, Andhra Pradesh, India, - 530 048 ----------- -----------
 5)**M V Rama Sundari**
Address of Applicant :Gokaraju Rangaraju Institute of Engineering and Technology, Kukatpally, Hyderabad, Telangana 500090 ----------- -----------
 6)**Dr. Ch. Asha Immanuel Raju**
Address of Applicant :Andhra University College of Engineering, Andhra University, Visakhapatnam, Andhra Pradesh, India, 530003 ----------- -----------
 7)**Dr.I.Lakshmi**
Address of Applicant :Hindustan institute of technology and science, Rajiv Gandhi Salai (OMR), Padur, Kelambakkam, Tamil Nadu 603103 ----------- -----------
 8)**TVL Srinivasa Rao**
Address of Applicant :BVC Engineering College, Odalarevu – 533 210, East Godavari, AP ----------- -----------
 9)**Dr. R. Santhoshkumar**
Address of Applicant :St.Martin's Engineering College Sy. No.98 & 100, Dhulapally Road, Dhulapally, Near Kompally, Medchal–Malkajgiri district Secunderabad-500 100. Telangana, India. ----------- -----------

(57) Abstract :
Security is always a main concern in every domain, due to a rise in crime rate in a crowded event or suspicious lonely areas. Abnormal detection and monitoring have major applications of computer vision to tackle various problems. Due to growing demand in the protection of safety, security and personal properties, needs and deployment of video surveillance systems can recognize and interpret the scene and anomaly events play a vital role in intelligence monitoring. This patent implements automatic gun (or) weapon detection using a convolution neural network (CNN) based SSD and Faster RCNN algorithms. Proposed implementation uses two types of datasets. One dataset, which had pre-labelled images and the other one is a set of images, which were labelled manually. Results are tabulated, both algorithms achieve good accuracy, but their application in real situations can be based on the trade-off between speed and accuracy.

No. of Pages : 11 No. of Claims : 5