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| <p>(51) International classification :A61B5/0022 (31) Priority Document No :NA (32) Priority Date :NA (33) Name of priority country :NA (86) International Application No :NA Filing Date :NA (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</p> | <p>(71)Name of Applicant : 1)Dr. APARNA CHAPARALA (PROFESSOR) Address of Applicant :DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, RVR&JC COLLEGE OF ENGINEERING (A), CHOWDAVARAM, GUNTUR, ANDHRA PRADESH, INDIA-522019 E-mail: achaparala@gmail.com , Phone+91-9959785795 Andhra Pradesh India 2)Dr. M.V.P. CHANDRA SEKHARA RAO(PROFESSOR) 3)Dr. RADHIKA SAJJA (ASSOCIATE PROFESSOR) 4)Dr.R. LAKSHMI TULASI (PROFESSOR) 5)V.S.J.R.K. PADMINI VALLI (ASSISTANT PROFESSOR) 6)M. VASAVI (ASSISTANT PROFESSOR) 7)NEHA KRISHNA DASARI (72)Name of Inventor : 1)Dr. APARNA CHAPARALA (PROFESSOR) 2)Dr. M.V.P. CHANDRA SEKHARA RAO(PROFESSOR) 3)Dr. RADHIKA SAJJA (ASSOCIATE PROFESSOR) 4)Dr.R. LAKSHMI TULASI (PROFESSOR) 5)V.S.J.R.K. PADMINI VALLI (ASSISTANT PROFESSOR) 6)M. VASAVI (ASSISTANT PROFESSOR) 7)NEHA KRISHNA DASARI</p> |
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(57) Abstract :

Patent Title: ISAFE-DNN Intelligent System for Assisting Fire Egression using Deep Neural Networks. ABSTRACT Our Invention ISAFE-DNN is with urbanization and socio-cultural changes, size and nature of commercial complexes is changing drastically. In such campuses, there are usually possibilities of fire accidents. For instance, due to high cooking temperatures used in the kitchens of food serving outlets/restaurants or improper electrical wiring in the commercial outlets of the campus. During festival seasons or special occasions, the properties reach their maximum capacity. Fire evacuating these facilities especially during rush hours, presents numerous challenges. Improper evacuation may lead to increase the fatality count due to stampede. To minimize the human loss in such cases, stampede should be avoided. Properly planned evacuation route minimizes the chance of stampede. The present work is to detect fire by monitoring the pre-installed temperature and smoke sensors and guide the occupants to safe evacuate the building before the fire fighting team arrives. To determine the dense regions of crowd in the building, crowd counting techniques can be used. Based on the density of the crowd and obstacles in the path, non-overlapping evacuation paths will be generated dynamically. The system adapts to the environment and changes the evacuation route on its own without human intervention. In addition to providing directions for safe evacuation to the evacuees, the system controls the closing/opening mechanism for the doors/gates in the building for minimizing the chance of stampede further. This system makes use of preinstalled temperature and smoke detection sensors for detecting fire and existing CC TV Cameras for counting the crowd.

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