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(51) International classification :A61B 050000, A61F 090800, A61H 030600, B64D 450000, G09B 210000 (86) International Application No :PCT// 　　　　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	(71)**Name of Applicant :** 　1)**S.Balamurugan** 　　Address of Applicant :No.21, Kalloori Nagar, Peelamedu, Coimbatore-641004, Tamilnadu, India ----------- ----------- 　2)**Prof.Dr.Osman Ahmed** 　3)**Dr.K.Abirami** 　4)**Sambit Pattanaik** 　5)**Dr.Sunitha R** 　6)**Dr M Vykuntarao** 　7)**Dr. Nikita Jain** 　8)**Dr. Gulzar Ahmed** 　9)**C R Srinivasan** 　10)**Dr. Srividya R** 　11)**R.Renugadevi** 　12)**Suseela D** 　13)**Dr. Satish Muppidi** **Name of Applicant : NA** **Address of Applicant : NA** (72)**Name of Inventor :** 　1)**S.Balamurugan** Address of Applicant :No.21, Kalloori Nagar, Peelamedu, Coimbatore-641004, Tamilnadu, India ----------- ---- ------- 　2)**Prof.Dr.Osman Ahmed** Address of Applicant :Professor & Vice Principal, Deccan School of Pharmacy, Goshamahal, Aghapura, Goshamahal Rd, near Nampally, Hyderabad, Telangana 500001, India ----------- ----------- 　3)**Dr.K.Abirami** Address of Applicant :Assistant Professor, Vels Institute of Science, Technology & Advanced Studies (VISTAS), Velan Nagar, Krishnapuram, Pallavaram, Chennai, Tamil Nadu 600117, India ----------- ----------- 　4)**Sambit Pattanaik** Address of Applicant :Assistant Professor at GITA Autonomous College, Bhubaneswar, Badaraghunathpur, Beside NH-5, Janla, Bhubaneswar, Odisha 752054, India ----------- ----------- 　5)**Dr.Sunitha R** Address of Applicant :Associate Professor, Dept. of AIML, BNMIT-560070, 12th Main Road, 27th Cross, Banashankari Stage II, Banashankari, Bengaluru, Karnataka 560070, India ----------- ----------- 　6)**Dr M Vykuntarao** Address of Applicant :Associate professor, Mechanical Engineering, GMR Institute of Technology, GMR Institute of Technology, GMR Nagar, Rajam, Vizianagaram District, Andhra Pradesh Pin code: 532127, India ----------- ----------- 　7)**Dr. Nikita Jain** Address of Applicant :Mewar University Chittorgarh, Rajasthan- 312901, India ----------- ----------- 　8)**Dr. Gulzar Ahmed** Address of Applicant :Associate Professor, Dept. of Physics, Mewar University, Chittorgarh, Rajasthan-312901, India ----------- ----------- 　9)**C R Srinivasan** Address of Applicant :Assistant Professor-senior scale, Instrumentation and Control Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, Karnataka- 576104, India ----------- ----------- 　10)**Dr. Srividya R** Address of Applicant :Associate Professor, Electrical and Electronics Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, Karnataka- 576104, India ----------- ----------- 　11)**R.Renugadevi** Address of Applicant :Kit-kalaignarkarunanidhi institute of technology, Pappampatti Rd, Pallapalayam, Kannampalayam, Tamil Nadu 641402, India ----------- ----------- 　12)**Suseela D** Address of Applicant :Bannari Amman Institute of Technology, Sathyamangalam, Sathy - Bhavani State Highway, Alathukombai, Post, Sathyamangalam, Tamil Nadu 638401, India ----------- ----------- 　13)**Dr. Satish Muppidi** Address of Applicant :Associate Professor, Department of Computer Science and Engineering, GMR Institute of Technology, Rajam, GMR Nagar, Rajam, Vizianagaram District, Andhra Pradesh Pin code: 532127, India --------- -----------

(57) Abstract :

Recent Days have shown a steep rise in the development of assistive technologies to help visually impaired people. According to a research report from World Health Organization (WHO), nearly 38 million people are blind worldwide and nearby 110 million people suffer from other types of visual impairments. Statics indicate that seven in 1000 people are affected by various degrees of blindness and most of the people suffering from visual impairments are from developed countries. Proposed is a new assistive technology. Wearable monitoring system for visually impaired people using IoT Based Intelligent Activity Tracker. System consists of sensors including Accelerometer, Voice Recognition Sensor, Light Detection Sensor and Ultrasonic Sensors. Wearable Sensor Unit is connected to the computational module using Blutooth, Wifi and Zigbee technologies. For efficient face detection, face image is subject to line edge mapping. From the mapped image identification of face region and feature extraction is carried out. After line edge mapping face region selection is carried out and match with the template is displayed. Inertial Sensor is responsible for Kalman Filtering and accelerating Slide Detection and Position Estimation controlled by Fuzzy Inference System. Active RFID tag is used to carry Radio Frequency Signal Strength information to probabilistic model for position estimation based on location probability, Convolutional Neural Networks are employed for segmenting images based on RGB, depth and semantics to convert instruction to track visually impaired people.

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